NEW YORK • LONDON

WORLD PETROLEUM

Natural Curtailment Brought About Price Advance • International Trade in Lubricating Oil • Oil Export Transactions of Soviet Russia • Lord Bearsted Deplores U.S. Waste • Venezuelan Curtailment Program • Anglo-Persian's 1930 Operations •

AUGUST • 1931

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AUGUST
1931

WORLD PETROLEUM

(Incorporating "Petroleum Equipment Exporter")

VOLUME II NUMBER 8

CONTENTS

Frontispiece	468
Editorial	469
Production	503
Shipping	497
Finance	499

Special Articles

TITLE	AUTHOR	PAGE
Natural Curtailment Brought Price Advance		471
Lord Bearsted Deplores U. S. Oil Waste		472
Sir John Cadman and Industry's Problem		473
Oil Export Transactions of Soviet Russia		474
Anglo-Persian's 1930 Operations		477
Venezuela Practices Oil Curtailment	C. C. McDermond	478
International Trade in Lubricating Oil	C. L. Jones	483
Separating and Mixing Problems	H. M. Weir	490
Petroleum Prospects of Sakhalin	B. Zavoico	492
Water White Color in Gasoline, II	Truesdell, Egloff and Morrell	493

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A study in mud and oil. Will Connell

NEW YORK • # WORLD PETROLEUM • LONDON

ONCE again the atmosphere of the petroleum trade has been disturbed by Russian marketing operations—this time the reported sale of a cargo of gasoline to an independent distributor in Detroit. This transaction, more spectacular than important, has already produced more serious difficulties for those concerned in the transaction than for American companies with whom the supply would compete, because the individual who acted as broker between the Soviets and the Detroit company apparently was not sufficiently experienced in oil marketing to realize that a million gallons of gasoline accepted at an eastern port of the United States at three cents per gallon for delivery in Detroit at four-and-a-half cents must be a losing deal, since the rail freight rate is approximately three cents and the costs of water transportation via the St. Lawrence is about equal to the margin, even if Lake tankers were available. Consequently it is not surprising that the deal has not yet been consummated, and, according to Amtorg, Russia plans no drive on the United States motor fuel market, but this does not mean that an occasional cargo might not be shipped.

Russian Marketing

So far we have been able to trace but few sales of Russian gasoline to distant ports where the result has been satisfactory enough to produce repeat orders on a large scale. Russia's vast production plan is causing her to seek market expansion, and in her efforts she is endeavoring to enter fields where old international companies are strongly entrenched, and where she is without adequate storage and distributing facilities, instead of limiting her selling within a radius geographically advantageous.

In her own interest Russia may do well to limit her marketing operations to countries geographically convenient to refinery locations and shipping facilities, for in these spectacular long-haul transactions she is jeopardizing one-third of her total export sales by assuming the risk of antagonizing the British and American companies who last year purchased for their British, Near East and other European and Indian operations, 10,522,500 barrels of the total of 36,000,000 barrels that the Soviet succeeded in exporting. In fact, the situation is said already to have become delicate as a result of attempts at sales of petroleum products in the markets of her customers; and it is reported that an envoy from Moscow has been in the United States for nearly two months in this connection.

It will be recalled that G. P. Whaley, former chairman of the Vacuum Oil Company, in July 1927, raised the question as to whether it is more intriguing to purchase from the Russians than it is to sell to them. In some markets they are geographically and ecoomically nearer than is the United States and for these markets, he intimated, his company would buy Rusian petroleum products; but in cases where the nearest port of supply was America, Vacuum would ship domestic products. Such was the understanding given to the press of the policy existing between the Standard Oil group and the Russians. If the Soviets penetrate their own customers' markets, it is only natural to assume that the huge purchases of the oil group may stop. In that case Russia would not find it easy—if indeed she did not find it impossible—to create quickly new markets that would absorb the same supply. Such an eventuality would place the Soviets in an unfortunate position.

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SINCE the voluntary agreement on imports of crude oil from the Caribbean into the United States first went into effect, prices of domestic crude and gasoline have steadily decreased, clearly indicating that imports have very little influence in any direction on the disturbed situation as they are more than balanced by exports. Nevertheless, strong appeals have recently been made to President Hoover by independent oil producers to place petroleum imports in the class of 'unfair competition' under the Smoot-Hawley tariff act. The White House, showered by telegrams and letters, has just issued an opinion by Attorney General Mitchell to the effect that Section 337 of the tariff act has no application to the demoralized conditions due to overproduction in the domestic petroleum industry, and that Congress has not authorized the President to exclude merchandise under these conditions.

Hoover Opposes Embargo

"In all works on unfair trade and in the decision on the subject," said the Attorney General, "there is found no suggestion that the mere importation of articles in to the United States constitutes unfair competition or unfair trade merely because there is already an oversupply of the article within

the United States and the effect of the importation is further to depress the domestic industry.

"If merely increasing the domestic oversupply is an act of unfair competition, not only the importation but the further production of oil within the United States at the present rate would constitute unfair competition forbidden by law, and surely no one would contend for such a proposition.

"It could not be seriously contended that Congress intended to give the President power to declare a general embargo on the importation of any articles of merchandise whenever, in his opinion, the domestic supply outruns the demand. There is nothing in the facts disclosed to suggest that the importation of oil under these conditions is pursuant to any conspiracy on the part of importers to create a monopoly.

"I have assumed, in giving this opinion, that the current imports of oil are in such quantities and under such conditions as to have a substantial effect on prices in the United States; but, of course, a thorough understanding of world conditions in the oil industry may show this is not so."

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Australians and Oil

BECAUSE of his stand on the importance of modern American drilling equipment and thorough geological and geophysical practice in the search for oil in Australia, Dr. W. G. Woolnough, geological advisor to the Commonwealth Government, has been attacked in the Australian press and accused of being an agent for American petroleum interests. Vast sums have been spent during recent years in drilling for petroleum in the Antipodes. Some of these operations have been conducted by stock market gamblers although there are many honorable exceptions. So it is only natural that Dr. Woolnough should emphasize the advisability of employing experienced drillers and other technicians and superior equipment for he is convinced that failure after failure will result until the exceedinly high mechanical standards demanded by the A. P. I. are adopted.

"Now in extensive use in Australia," says Dr. Woolnough, "is a considerable amount of make-believe and shoddy imitations of American technique, and inferior and unsuitable equipment. In many instances the absurdly small paid up capital of oil companies promoted for the search of oil is squandered in costly producing plants instead of being spent in legitimate prospecting, and there exists much spurious activity in oil search. Extravagant promises are not realized, and often positions are held by officers and other officials as long as possible by the issuance of reports of oil showings and sheer hard luck in meeting with drilling difficulties." While such comments are justified, rumors have been distributed and there now is wide spread belief among misinformed people that American oil interests are engaged in wilful sabotage of Autsralian oil wells." "This of course," adds Dr. Woolnough, "is entirely without foundation."

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Oil, Autos and Roads

APART from the matter of detours due to new road construction, which are necessary inconveniences, it is practically impossible to take long motoring trips in any part of the American union without running into numerous bottlenecks and bad stretches of road, a condition discreditable to its highway authorities in a country of the population and wealth of the United States. This even applies in New York State where in the twelve months ending December, 1931, no fewer than 950 miles of paved highway will have been completed at a cost of $58,200,000, although its gasoline tax receipts will only amount to about $30,000,000.

What is needed to aid the American oil industry in its over production problem is increased consumption. This can be brought about by a strenuous campaign for better roads everywhere, which if properly organized will result ultimately in splendid continuous asphalt or concrete highways linking all cities, with through routes enabling town and village main thoroughfares to be avoided when desired. The future will see broad speedways capable of handling five times the present traffic at high speed, and consumption of gasoline and oil will increase proportionately. It is up to the petroleum and automobile industries to expedite construction.

The A. P. I. is doing good work in fighting the diversion of gasoline tax income to work other than that of road building; but this is totally inadequate; especially as bad stretches on main roads are often in small towns and villages. Without any increase in operating cost all oil companies and all automobile concerns—big and small—could include a plea for better roads in their advertising; their salesmen and other employees everywhere could be instructed to urge upon local authorities the importance of finer highways; all gasoline stations and salesrooms should carry posters, and representations should be made to the police in all districts to concentrate— not on speeding— but on careless, reckless and hoggish driving. The railroads will be hard hit, but they have failed to grasp the opportunity of meeting the inevitable competition by building motorcar and bus toll roads over their own rights of way.

▼

Cooperation or Trade War

EMERGING from the chaos of the Rumanian petroleum industry an accusing finger points to the Steaua Romana as being largely responsible for the existing demoralized situation, if one may accept the comments in the financial reports of two major oil companies operating in that country. Steaua Romana, it is maintained, was responsible for the termination of the restriction agreement, and thus accountble for the overproduction of crude and consequent critical conditions in the local market.

Last year an agreement was entered into by practically all companies operating in Roumania to restrict production in an effort to establish more orderly marketing conditions. This agreement became effective in the latter half of July and continued in force, with obvious benefit to the entire industry in Roumania, until December, 1930, when in spite of strong representations made by Astra Romana and the Phoenix Oil and Transport Company, Steaua Romana gave notice of the termination of the agreement. Since then conditions in Roumania have become steadily worse until, as previously indicated in WORLD PETROLEUM, that country now constitutes a greater menace to the weakened European price structure than does the agressive marketing policy of Soviet Russia.

In attempting to fathom the motive behind the action of the Roumanian company it should not be overlooked that such a policy may be considered a most effective though drastic, cure for the evils which cause overproduction. Instead of resorting to artificial restraints, companies in a stronger financial position than the majority of their competitors, may prefer the alternative of assisting the action of economic law by operating at a loss until such time as low prices have cleared the field of competitors having higher costs or less financial strength to tide them over a prolonged period without profits. This is not the modern view which holds that industrial cooperation is preferable for many reasons to destructive competition but it may still prevail in some parts of the world.

Natural Curtailment Brought Price Advance

Economics of Supply-at-a-Price Notably Demonstrated by Recent Events in Oklahoma Oil Fields. New Factors and Effects are Continually Arising for the Oil Executive to Study and Handle.

FACED with a combination of new conditions in the petroleum industry brought about by the sudden change in world economics in conjunction with vast overproduction, oil leaders today are continually meeting with new problems and consequently are learning things from the new school of thought in which they are being forced to take education. Object lessons already are offered by the fact that when the new and prolific East Texas field increases its output by 100,000 barrels, Oklahoma cuts back an equivalent output. In this illuminating article the results are informally, but ably, discussed by the close student of the oil business who contributed the discourse on economic law last month.

AN excellent object lesson was afforded the proponents of artificial crude supply curtailment methods recently when Oklahoma reduced runs because price levels had fallen far below production costs. The immediate response of the buyers was to post a substantial advance in their quotations.

The price declines—always too late and too low—had established Oklahoma crude at 10 to 22 cents per bbl., depending upon the gravity, and the advances at the time of writing have brought the price up to 40 cents for all gravities, or somewhat above the levels prevailing before the last cut. It seems extremely significant that this latest posting is for all gravities, not confined merely to the higher grades of crude which obviously are in greatest demand.

The natural inference is that it evidences a disposition on the part of the refiners to encourage the maintenance of operations of numerous small wells, regardless of the absolute competitive value of the oil. This indicates a recognition of the necessity of always retaining sources of supply other than temporary, local flush wells—a realization that the purchasing agencies appear to have ignored recently.

With the posted price for the lower gravities raised from 10 cents to 40 cents concrete evidence was given that even the remarkable reserve in East Texas cannot supply all refineries and all markets. And the striking fact that one commodity *doubled and redoubled in price over-night*—during the Summer of 1931!—lends proof to the argument that all producers need not necessarily suffer because of the folly of a few.

Considerable interest has been aroused in the exact price level established by the revision. It is above the scale—25 cents to 37 cents, prevailing before the last cut and probably does not amount to a reasonable average of the production costs in the fields affected. It may be a fair approximation of their lifting costs, or the actual cash outlay involved in operating the wells.

Operators should not take long to realize, now that their attention has been focussed on this point, that a break-even standing on cash income and outgo is likewise an inadequate incentive for operating their properties and liquidating capital assets at a loss. The next step to be expected, therefore, is an insistent demand on the part of producers to realize a figure for their crude at least equal to production costs, acquisition, development and operation, the latter including lifting costs, management, taxes, interest and other fixed charges.

Careful cost accounting will disclose widely variable figures for oil properties, especially in different fields, and hence some producers will find prices satisfactory long before others do. Consequently the low-cost production will come onto the market earlier and the tendency will be to reduce costs, since that brings about profits just as directly as raising prices. But, in no event should there ever be any necessity for offering crude below its actual production cost.

No avoidable hardship is worked upon the operators who thus stop producing when their production is unprofitable. At least they retain their assets, instead of disposing of them at bankrupt levels, and if they never do become commercial again the situation could not have been rectified by continuing operations at a loss, whereas the shut-down in itself is a positive step towards bettering conditions.

In the progress of this program, which seems inevitable and, in fact, actually has started, similar attention to costs may well be expected by all producers eventually, even in the mad hysteria of flush fields such as East Texas. There they will soon come to realize that their ultimate cost per barrel, even including this first flush production selling now at 5 to 15 cents, will prove to be in the neighborhood of 40 to 60 cents per bbl. Reckless drilling and forced production will bring it nearer the higher figure, whereas orderly development and conservative operation could hold it closer to the lower figure.

When competition for crude outlets is converted to a production — cost basis, rather than a "desire-to-sell" basis, this phenomenal pool, which in six months has been one of the factors which have nearly wrecked the oil markets of the world, will also demand a price commensutate with its costs and the history of oil in 1931 will become an incident

incredible in our modern industrial organization. It can only be hoped that the lesson may have been sufficiently severe to prevent a recurrence in the future.

All this involves no "artificial control," no meddling with sound economics, no hold-up of the public, no violation of existing laws, and no drastic Federal interference. It will encourage the efficiency and economy favored by joint development, unit operation and cooperative marketing, and a demand may arise for new laws facilitating those improvements, desirable at present but necessary in the future.

Thus we will see the oil industry steadily marching along a safe highway towards stabilization, quite apart from any action that the Texas legislature may choose to take.

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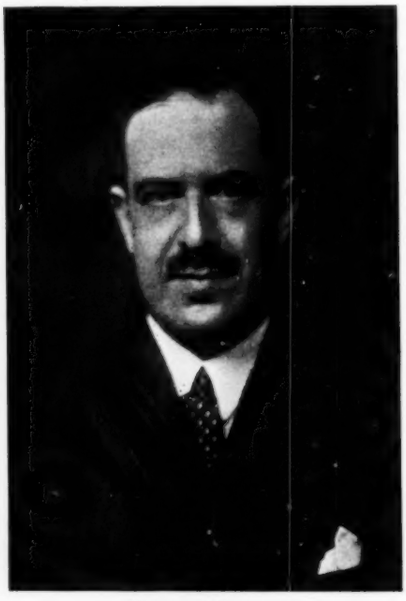
Lord Bearsted Deplores U. S. Oil Waste

Posterity Must Pay for American Prodigality, Says Chairman of Shell Oil. Way to Better Conditions Must Be Long and Rough. Remedial Measures Cannot Be Felt Immediately.

WITH its vast world-wide organization, the Royal Dutch-Shell petroleum group is in an advantageous position to make a careful study of trade conditions in every country, and comments emanating from this quarter are usually worthy of careful consideration by oil executives everywhere.

Before us is the annual report of the Shell Transport and Trading Company, which forms one of the principal units of this big British-Dutch oil organization. In his address to the stockholders, Viscount Bearsted, chairman of the board and one of the managing directors of the company, deplores the fact that the petroleum industry of the United States has been unable to prevent some of its oil resources from being brought to the surface, instead of treating them as reserves, thus creating a definite overproduction within the country. Mean while building up huge stocks has brought about a serious collapse of prices.

Happily in a number of world oil fields a very sensible drilling policy has prevailed, and as a consequence crude has been produced upon an economic basis. It is to be regretted, say Lord Bearsted, that in many U. S. fields the industry has been unable to prevent almost reckless drilling campaigns, and as a consequence these fields have been not only over-developed but ruthless drainage has taken place. It is clear that in such cases the maximum economic use of gas pressure has not been secured, and some



Viscount Bearsted

day posterity will have to pay for this unwarranted prodigality of natural resources.

In view of the operations of the Shell Union Oil Corporation and its subsidiaries in the United States, the British-Dutch company is directly affected, as it naturally prospers or suffers with the American industry. As pointed out by Lord Bearsted, it can well afford to await a better trend of events as its position as regards cash and reserves is unusually strong, although the passing of dividends was necessitated by the prevailing low prices.

Emphasizing the fact that price cutting is rampant today, Lord Bearsted maintains that Shell has never instituted price cutting, but that its policy is to hold its share of the trade by meeting price cuts, no matter to what length it may have to go in order to maintain an outlet for its production. Shell has a policy of conservation of production and of scientifically adjusting supply to demand, and it is Shell's belief that such a policy is the only sound and logical method of operation.

The oil industry is concerned with the vital requirements of civilization and must, therefore, continue to exist in all and any circumstances. It will be one of the first to revive when world conditions improve. Lord Bearsted further expresses the opinion that the present depression in the oil industry is obviously due to causes outside of the scope of the industry itself, including the fall in the price of silver, the Australian money stringency, the hoarding of gold, war debts, high tariffs, heavy taxation and the uneconomic competition of Russia.

The company is outstanding in world transportation of oil, having a fleet with a voyage carrying capacity of about 15,750,000 bbl., and during 1930 carried nearly 140,000,000 bbl. crude and refined products. Owing to the falling off in demand several tankers have been laid up, but are gradually coming into service as the chartered vessels go off hire. By the middle of 1932 it is probable that the company will not have any tankships unemployed.

Lord Bearsted points out the excellent progress which has been made and continues to be made in introducing fuel oil in specialized industries, particularly where a close degree of temperature con-

trol in manufacture is demanded. Interesting developments can be looked for with oil-engined trawlers as the greater radius of action, higher speed, and reduced running costs promises to restore prosperity to the fishing industry, at the same time providing valuable orders for shipbuilders and oil engine manufacturers.

Lord Bearsted is also chairman of the Venezuelan Oil Concessions, engaged in producing crude in the Caribbean. He told the stockholders at the recent annual meeting that the policy of the company from the beginning has been that of a producing concern and the directors have steadfastly refrained from changing that policy or yielded to specious arguments dictated by temporary conditions. Economy has been pressed in all field operations in Venezuela, which has not interfered with the program of re-conditioning storage tanks to preserve the quality of the oil during handling and reduce fire losses.

The company has contracts with the Asiatic Petroleum and the Canadian Eagle for a total of 11,000,000 bbl. of crude oil per annum; but these concerns actually took more oil last year than called for by the agreement. Nevertheless, Venezuelan Oil Concessions participated in the efforts to maintain something approaching a balance between the production and consumption of oil, and at the beginning of 1929 entered into a temporary and informal agreement with the other large producers in Venezuela. Since then a step further has been taken and the total production of the country reduced from an average of 375,000 bbl. a day in 1929 to the present output of 308,000 bbl.

Lord Bearsted regrets that this very sensible policy has not been followed consistently in other parts of the world, and draws attention to the fact that destructive overproduction in one area in the face of sensible and conservative policy in another, does not justify a disregard of this sound policy by the party who adopted it, merely to keep pace with the party who has disregarded it.

Because of its rapid rise to the position of the second largest producing country in the world and because of its enormous proved and prolific areas, Venezuela is looked upon in certain quarters of the United States as a menace to the industry. Venezuela Oil Concessions has played its full part in curtailments despite the fact that it is in a position to almost double its production. Offset drilling agreements with two important American companies remained in force.

Cadman and Industry's Problems

At the recent annual meeting of the Anglo-Persian Oil Company, Sir John Cadman, chairman, reviewed the past year's operations of the company. Sir John also commented on world conditions as a whole, pointing out that the factors of overproduction and underconsumption, which are to a very large extent complementary, have for some time past conspired to produce a difficult and, at times, a disorderly position.

Within the United States, centre of the world's greatest production and consumption, the situation according to Sir John, has been rendered particularly acute by the synchronization of lower spending power with the discovery of great new sources of supply, the flush production at times assuming embarrassing proportions. Another cause for the general oil market depression has been the increase of exports, largely uncoordinated with market demand, from Russia and Roumania. Another factor has been that owing to improved cracking methods a ton of average American crude now produces about 42 percent of motor fuel as compared with 32 percent some five years ago.

The petroleum industry, continues Sir John, obviously cannot hope to dissociate its own progress from the effects of what might be called the industrial anaemia with which the world is afflicted today. Solution of its own special problems is rendered more imperative and urgent by the impact of these adverse exterior forces, and this very impact should lead to a great concentration of the effort within the industry itself to exploit every possible means whereby equilibrium can again be established. By the industry solving its own problems it may hope to contribute to the solution of the world problem. In 1930, Anglo-Persian showed a profit of $32,700,000.

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British Oil Supply from Coal

In certain circles in Great Britain there is considerable agitation over the fact that so much so-called "foreign" oil is annually imported into the country. Opinion on this varies all the way from the die hards who maintain flatly that the country should go back to the collieries and use nothing but British coal to more moderate thinkers who believe that if the automobile industry is to be maintained on its present basis, the trend cannot be retrogressive and cut out oil or petrol, and that the tendency should be towards extracting oil from coal.

With this thought in mind a meeting was recently held in London under the auspices of the Fuel Committee of the Society of Chemical Industry, at which fuel experts, economists and others were invited to discuss the possibility of extracting oil from coal. The meeting was a crowded one, but frankly no headway was made. In this it corresponds with the meeting held last year by the Institute of Fuel to determine whether British coal should not be used in the British mercantile marine. Nobody had any constructive suggestions to make on the coal side, and at the end of the meeting the matter was left more or less where it stood. The oil industry was prominently represented by Dr. Dunstan, the chief chemist of the Anglo-Persian Oil Company, who pointed out that the over-production of oil today and the startlingly low prices in certain parts of the United States was due to the tremendous efforts recently made by technical men in improving production of oil. He gave some interesting details of the way in which this had been done, and pointed out that geophysics was an entirely new science of great value to the oil industry and that mechanics had tended not only to speed up drilling, but to increase considerably its accuracy. The business of getting oil, he felt, was no longer a haphazard one; but a highly scientific one. Dr. Dunstan's contribution in our opinion seemed to be the only constructive contribution on the economic side, although some interesting details were given of the results of hydrogenation, the treatment of bituminous coal by this process not offering any engineering difficulties greater than those already overcome in the case of tar and heavy oil.

A. C. Hardy.

Oil Export Transactions of Soviet Russia

Limited Supply Shipped to the United States Fraught with Commercial Difficulties. Shipments Unlikely to Mount to Sizable Quantities. No Further Deals Have Been Made.

WORLD-WIDE interest was aroused by WORLD PETROLEUM'S article last May on the obstacles and problems faced by the U. S. S. R. in its drive on international markets for disposal of the huge quantities of crude and refined products planned to be produced and exported under its Five Year Plan. The information given threw an entirely new light on the situation, and made it clear that the Soviets are up against heavy odds in their expansion program and are very unlikely to be able to accomplish completely their aim; in fact, results will probably fall far short of their expectations, which Moscow apparently finds it hard to understand. Nevertheless, in the face of poor international business conditions in general the Soviets must be given credit for the fact that their energetic sales efforts resulted in increasing their export business in one year by about 8,000,000 bbl. On the other hand exports for the first quarter of this year amounted to 7,531,027 bbl., or a substantial drop from the last quarter of 1930.

One attempt to enter the United States gasoline market has been made, and it was fraught with commercial difficulties, and cannot be regarded as a success from a strictly business aspect, although it was an actual sale for the Soviets. Yet the business depression and price cutting rampant in the American petroleum industry has produced a situation that should be favorable to Russian gasoline sales operations. There are many independent chains of service stations which have been affected heavily by the generally depressed conditions and continuous drops in sales and prices in the highly competitive market, some of those concerns consequently may be willing to purchase supplies of Russian refined products in the hope of improving their sales position; especially as a belief exists in some quarters that sales at any price mean profit to the U. S. S. R., thus making it a buyer's market. There also seems to be current the understanding that the Soviets are ready to send a special envoy for the express purpose of helping its customers "fight" the big oil organizations.

ALTHOUGH the United States is the world's biggest consumer of gasoline, and is the greatest importer as well as the largest producer of crude and refined petroleum, Russia has made but little attempt to enter the North American market, and such transactions as have been made have been more spectacular than commercially successful. World Petroleum in this discussion outlines reasons why future cargoes from Black Sea ports are not likely to assume seriously competitive proportions. Nevertheless, American oil companies have formed the most important group of customers for Russia's oils; but such purchases are not imported as they are used entirely in overseas trade. This fact forms one strong protection against a flood of Soviet oil entering U. S. markets.

During recent weeks the daily press has published the story of the sale of a considerable quantity of Russian gasoline to the Sunny Service Oil Company, an organization that operates a chain of stations in Detroit, Michigan. Officials of the company neither denied nor confirmed the arrangement to newspaper representatives, and details of the contract were not disclosed. Information has reached WORLD PETROLEUM to the effect that endeavors to arrange such a transaction were made by an intermediary, or broker, named John Bagajeff, an employee of the Hardie Manufacturing Company, P. O. Box 492, Detroit. WORLD PETROLEUM had great difficulty in reaching the Hardie Manufacturing Company by telegraph. According to the Postal Telegraph Company, Bagajeff has left the United States for Moscow, which would indicate that the details of the contract have not yet reached a satisfactory conclusion. As a matter of fact, we have been advised by the Amtorg Trading Corporation that no such contract has been entered into, nor have any sales of gasoline in the United States been arranged since the shipment to Baltimore last year. They have, of course, been approached by numerous individuals and companies who apparently have assumed that Russia will virtually give away her gasoline provided she can find marketing outlets in the United States.

WORLD PETROLEUM feels that American representatives of the Soyousneft have been in this country long enough to become sufficiently acquainted with domestic commercial and political conditions, and will not enter into any contracts which would tend to arouse active embargo agitation among mid continent oil interests who are already incensed with American oil companies for importing South American petroleum; nor are they likely to conclude deals that would be frowned upon by the American group which purchases a large quantity of their refined products for world operations.

The report was that the Bagajeff-Sunny Service contract called for an initial shipment of 1,000,000 gal. (23,809 bbl.) of gasoline through the Amtorg Trading Corporation of New York, with an option for a further 10,000,000 gal. (238,095 bbl.), and that the price to Bagajeff delivered to an Atlantic port nearest Detroit was 3 cents per gal., the

Sunny Service Company paying 4½ cents per gal. delivered at Detroit, Michigan. Doubt has arisen as to the financial ability of Bagajeff to handle the deal which he was endeavoring to put through, due to the fact that the Sunny Service Oil Company is said to have arranged for payment following delivery of the gasoline in Detroit. This means that it would be necessary for Bagajeff to cover the cost of shipment of the gasoline from the Atlantic port to Detroit, which by rail would be about 3 cents; or, if tankers, or tugs and barges could be chartered—which is doubtful—the shipment via the St. Lawrence or New York State canal would amount at least to 1½ cents. Obviously such a transaction under these conditions would be carried out at a heavy loss, and it is understandable that the Soviets would not sign a contract unless they were reasonably sure that the undertaking would be sufficiently profitable to make their money certain.

There is another matter! Unless shipments of gasoline from Russia to the United States are of the same quality and have the same anti-knock value to which American motorists are accustomed, it would involve the expense of blending and the securing of facilities for blending. It will be recalled, that when the Island Export Company of Baltimore, imported in September, 1930 a shipment of 47,380 bbl. of Grozni No. 2 gasoline, they were faced with the fact that it had practically no anti-knock qualities. It was a good quality gasoline with the following specifications: gravity 62.5 A. P. I., initial boiling point 112 deg. F., end point 408 deg. F.

At the time the contract was placed the price of United States motor gasoline in Atlantic seaboard markets was around 9 cents. The Baltimore contract called for a price of 5½ cents per gal. f.o.b. Touapse, Black Sea, and the freight of 1¾ cents was paid by the buyer, making an aggregate of 7¼ cents. Just at that time market prices dropped very rapidly. The purchasers were also faced with the necessity for a high blending ratio of California light gasoline, which brought up the total purchase cost per gallon somewhat. Then the purchasers found that they were up against certain adverse marketing and banking conditions. When February of this year came around, they still had about one-half of the quantity in storage, so the attempts of the Island Export Company to improve its commercial position through the importation of Russian gasoline were seriously impaired. Options on the purchase of more cargoes from the Black Sea were dropped. All this cargo of gasoline has now been disposed of says the Island Export Company.

Many of the international oil companies properly recognize the rights of the Soviets to enjoy export business, although they believe that Russia should collaborate in the world wide curtailment efforts that are now being made, as the greater the production and more extensive her exports, the lower will be the price for the products. Russia has to meet her international obligations and is faced with the serious problem of securing money for completing her Five Year Plan. She must sell, but she is hampered by the fact that she paid high prices for much of her equipment and the prices of commodities manufactured by this equipment have taken a heavy drop during the last twelve months. In endeavoring to offset lower prices of petroleum products by increasing the quantity, the tendency is to produce a condition which by reason of a steady downward scale resulting from endless multiplication and division makes success impossible under the law of economics.

Every student of trade is satisfied that today's economic crisis, now affecting Russia as well as the United States and other countries, unquestionably is due to over-production in the major industries. Particularly is this the case with the oil business, where there has been no lack of consumption although there has been a lull in its growth or a slight drop in some directions. While certain steps have been taken by most producing countries towards proration and limiting activities, it is very unfortunate that the Soviets are actually glorifying their enormous production and exports, which they maintain will exceed those of the United States within a few years and so lead the world in oil. They appear to be sparing no efforts to enter markets and countries where they are at an absolute economical disadvantage. Does not such action lay the Soviets wide open to further criticism by those who maintain that policies of dumping are being followed during a trying period when close harmony and unselfishness in production and marketing is essential throughout the world? Unless Russia modifies this policy will she not lose heavily in the long run?

At the same time such efforts mean that to attain her desired trade expansion Russia must necessarily enter the markets where her own customers as well as competitors are already entrenched, and where she also will be faced with opposing factors brought about by geographical location. Such marketing cannot be satisfactory to herself or to her customers. To speak candidly, the tendency will be for her to endanger the relations with her customers.

As a matter of fact F. F. Jenko, director of the Soyusneft, has been in the United States for over two months. According to information emanating from Amtorg, Mr. Jenko has been actively negotiating with Socony-Vacuum, but before sailing he was not in a position to make any statement as to the outcome of the negotiations. Neither could we obtain any statement on the matter from Socony-Vacuum; but, as we have mentioned elsewhere, there have been practically no shipments of Russian kerosene and gasoline made to Egypt for Vacuum Oil during the past six months. On the other hand, the Soviets are very active in the Australian, South African and New Zealand markets and have practically signed the much discussed kerosene contract with a Chinese merchant following recently resumed negotiations. Hence, it is quite obvious that relations between the Soyusneft as sellers and Socony-Vacuum as buyers are more than estranged. Under the circumstances the absence of a statement by Mr. Jenko is significant.

Approximately one-third of her average annual exports are purchased by an international group, which almost could be called the Standard Oil group, consisting of the Standard Oil Company of New York, the Anglo-American Oil Company, and other European companies controlled by the Standard Oil Company of New Jersey, the Medway Oil Storage and Transport Company, the Vacuum Oil Company, and, indirectly, the Shell and Anglo-Persian organizations. Furthermore, the Gulf Refining Company, the Lubricating Oil Committee of London, and Andre Fils of Paris also purchase a quantity of lubricating oil from Rusia.

WORLD PETROLEUM is enabled to give, exclusively, a list of the average annual purchases of Russian petroleum products by this group, which information we believe has never before been made public. (See table on following page).

In this connection we also give a list of the annual distribution of exports of petroleum products from Russia by countries as follows:

Annual Distribution of Exports from Russia by Countries of Destination

Destination	Fiscal Yr. 1929-30 (Barrels)	Fiscal Yr. 1928-29 (Barrels)
England	6,898,250	6,024,750
Italy	6,195,750	4,286,250

France	4,476,750	2,826,000
Germany	3,884,500	3,618,750
Spain	2,709,750	2,391,750
Egypt	1,659,750	1,789,500
India	1,536,000	1,092,750
Turkey	1,422,000	1,365,750
Africa	791,250	657,750
Belgium	777,750	703,750
All other countries	4,322,250	3,174,750
Bunkers	1,349,250	834,500
Total	36,023,250	28,766,250

Presumably the 47,380 bbl. of gasoline shipped to Baltimore, Md. is incorporated under "all other countries."

Of the total exports during 1929/30 about 77 percent was shipped to Europe, and the balance of 23 percent was shipped to countries of the East, Near East, and Balkans.

Regarding the shipments to Egypt we understand that during recent months these have been entirely stopped, due either to the uncertainty in connection with the double entry duties on oil products from Russia in Egypt, or in some measure to the strained relations between the Russian Oil Syndicate and the Standard group on account of the Oil Syndicate's aggressive policy in established markets of the group.

It is reported that Sinclair executives recently were in Germany negotiating with the Soviets for the sale of their German marketing properties; but we understand that the deal was not concluded. It would be interesting to ascertain why Sinclair wants to sell and why Russia did not buy at a time when growth of her marketing facilities is very essential to enable her to handle her increased production!

One reason for the success of international oil companies in world marketing has been the enormous sums of money which they have been willing to lay out in advance in order to build up business and prestige in various countries over a period of years. This also includes heavy investments in transportation mediums, bulk storage facilities and gas station equipment, in collaboration with the fact that they completely control production, refining, transportation, including distribution and marketing, and in addition can buy further supplies from other sources at focal points to their markets. Russia on the other hand cannot afford to make huge investments in other countries, and must limit herself to purchases of equipment, material and engineering service which she buys on as long credit terms as she can obtain. Hence the comparatively high price she has to pay for equipment. Therefore, in marketing petroleum products she has to rely upon her purchasers having the proper storage and distribution facilities that she herself lacks. As the international oil group in question has been taking only one-third of her total exports, the Soviet marketing organizations have been obliged to negotiate with the smaller concerns for additional sales. Naturally, these smaller concerns do not have anything like the distributing facilities enjoyed by the big companies.

The Soviets are geographically situated to handle many of the European markets in an adequate way and unquestionably will expand their sales. We would not be surprised to see the Fve Year Plan adjusted to allow of increased internal consumption in the U. S. S. R., as her potential absorption is tremendous. Times have changed since the days when Sir Henri Deterding of the Royal Dutch Shell group said: "Produce the oil and the market will exist." Overproduction and price slashing then was no problem. Today, the Soviet Oil Trust is making strenuous efforts to enter world markets with the oil industry passing through the most chaotic and tragic state of its history, regardless of her internal affairs. Every oil country outside of Russia is prorating and limiting output (with the exception of one State in the Union) with a view to effecting a balance with consumption. In reaching out to distant markets, which Russia under her present conditions and facilities cannot handle with proper commercial success, she is running — in WORLD PETROLEUM estimation—the risk of producing a situation whereby the bulk purchase of one-third of her present exports may be cut off. Should such an unfortunate situation arise, where will Russia find an immediate market to absorb such a large quantity of petroleum products suddenly thrown into the ring?

Average Annual Purchases of Russian Oils by Standard Oil Group

		Tons	Barrels
FOR BRITISH ISLES			
Anglo American, Shell and Anglo Persian	Fuel oil	150,000	1,050,000
	Kerosene	60,000	465,000
	Gas oil	60,000	465,000
	Total	270,000	1,965,000
Medway Oil Storage	Kerosene	250,000	1,937,500
	Baku gasoline	125,000	1,062,500
Gulf, Andre Fils and Lubr. Committee of London	Lubricating oil	90,000	630,000
FOR INDIA			
New York Standard	Kerosene	180,000	1,395,000
FOR THE LEVANT			
New York Standard	Kerosene, gasoline and gas oil	90,000	720,000
FOR PORT SAID AND ISTANBUL			
New York Standard	Fuel oil, Diesel oil and gas oil	200,000	1,400,000
FOR EGYPT			
Vacuum Oil	Kerosene	130,000	1,007,500
	Gas oil	28,000	210,000
FOR CENTRAL EUROPE			
Vacuum Oil	*Various products	40,000	280,000
Total		1,403,000	10,607,500

* Not including cartel purchases when made.
Conversion basis: kerosene, 7.75 bbl. per ton; gas oil, 7.50 bbl. per ton; gasoline 8.50 bbl. per ton; crude fuel and lube oils 7.00 bbl. per ton.

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World Petroleum Directory

WHILE the initial announcement of this directory was made by the publisher at the time of the A. P. I. meeting in Chicago last December, the tremendous amount of work attendant on the collection of the necessary data has delayed somewhat its publication.

Announcement, however, is now made that this directory will shortly be available.

It is a directory of the active operating oil companies of the world. A compact, authoritative, accurate reference book giving the history, capital structure, personnel, location, and capacity of refineries and manufacturing plants; production capacity and location; marketing facilities, and areas of distribution. In fact, all important data pertaining to the world's oil companies.

In addition, this directory will contain world production figures by month and by year. Trends of consumption throughout the world and a section devoted to financial statistics, giving the high and low stock prices, etc. and brief comments on the last annual statements are included. Copies of THE WORLD PETROLEUM DIRECTORY may be obtained from the publisher—WORLD PETROLEUM, either at 153 Waverly Place, New York City; Bendix Bldg., Los Angeles or 110 Fenchurch St., E. C. 3, London. The price is $10.00 per copy. Advance orders are strongly recommended.

Anglo-Persian Oil's 1930 Operations

ALTHOUGH there are many difficulties ahead no industry is more assured of its future than petroleum. Notwithstanding the great recent discoveries of oil in the United States, it would be unwise to assume an unlimited abundance of that natural crude which now so freely flows to the surface. Oil derived from less accessible sources than those of today must inevitably cost much more to win and consequently must be sold at much higher prices than those ruling today. These are the views of the Anglo-Persian Oil Company.

It is with such considerations as these in mind that this company has consistently favored a plan of conservative development of its own natural resources, and, notwithstanding the difficulties through which we are all passing, we are confident that the future will amply vindicate the wisdom of this policy, not only for the industry but also for the consumers.

As regards the operations of the Anglo-Persian itself, drilling was originally confined to a limited zone on the Masjid-i-Sulaiman field, and the question was then asked: Could it stand up to an annual output of 500,000 bbl? Due to exploration with the greatest precision known to physical science, the oil zone of this field has since proved to be 21 miles in length, while the comparatively new field of Haft Kel is of equal or even greater dimension and potentiality. One well alone, in the older field, namely F-7, after producing a total of 35,000,000 bbl. during a continuous and untroubled life of 15 years, has been shut to conserve the gas. There are many other wells in Persia of equal or greater capacity.

In its operations Anglo-Persian employs 1,000 European and over 20,000 Persian employes, and has installed a regular air travel service from the refinery to the fields, linking with five air routes to England.

Price reductions have been on too severe a level to admit their being offset by any possible curtailment in operating expenses, although everything possible in reducing costs is being done. The company is well qualified, financially and technically to maintain both its producing and marketing positions, and when the business tide turns will be found capable of taking full advantage of its position, and in fact it is determined to do so.

The production of the company in 1930 amounted to 43,549,323 bbl., of which slightly over 7,000,000 bbl. was drawn from Haft Kel for balancing purposes only, since the entire output could with ease have been drawn from Masjid i-Sulaiman. From the small concession area in the "transferred territory" between Iraq and Persia a production of 570,000 bbl. was taken to meet the demands of the local market.

Nine new tankships were ordered by the Anglo-Persian last year, principally in replacement of old vessels, and the tanker fleet now consists of 85 ships of 780,000 tons deadweight capacity.

Sales and prices of the company in various parts of the world were on the whole well maintained during the greater part of last year; but, in the Fall a break occurred, which was accentuated by a heavy fall in tanker freights. Competition has been exceptionally severe due to the great activity among producers in seeking fresh outlets, and the decline in prices has continued until they have now reached the lowest levels recorded for many years.

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Tocuyo Oilfield Ltd. and Its Refinery

MENTION was made in the June number of WORLD PETROLEUM of a dispute between the Venezuelan Minister of Fomento and the Compania Tocuyo Oilfields of Venezuela, Ltd., which resulted in the filing of a Government suit against the Company to compel it to cease operation of a refinery which it is alleged to have established illegally, and to pay taxes on the gasoline alleged to have been produced illegally. From Tocuyo Oilfields, Ltd., in Venezuela, WORLD PETROLEUM has received copies of the briefs of the two opposing parties. From these it appears that the Government's case is based on a literal interpretation of the contract with the original concessionaire, to whom was granted a contractual right to exploit his concession for "asphalt, bitumen, tar, and petroleum," without paying taxes on these materials, and was to have the right to import, duty free, all equipment and appliances necessary for the exploitation and utilization of the said materials, if and when found. The Attorney General contends that as no mention was made in the original contract of "gasoline," and that as gasoline is the product not of a mine but of an industry, the Company cannot make gasoline without first acquiring a special permit, and in any case cannot escape paying taxes laid on gasoline by existing legislation.

The attorney for the Company counters by asking the Court what would motivate a capitalist to seek a concession and put himself to the expense of finding and extracting petroleum from the ground if he is denied the right to obtain the values contained in the raw material; and he further asks what did the Government mean when it contracted to allow the duty free importation of all necessary machinery and appliances for exploiting this material, if this equipment was not for the purpose of enabling him to put the raw material he should find into a saleable form? Besides, the Company contends that the Venezuelan constitution grants to every citizen the right to engage in industry except in regard to means of transportation and communication, and hence it was under no obligation to seek a concession for establishing and operating its refinery, or to pay taxes in any form on materials which, by the terms of a contract signed with the Government, are exempted from taxation; it contends that the contractual rights thus acquired by the act of the Government cannot be abrogated by subsequent legislation.

Derricks and docks at Lagunillas

Venezuela Practices Oil Curtailment

Production, Exportation and Drilling Summary for First Six Months of 1931. Review of Operations Gives Picture of Restrictions.

By C. C. McDermond

MARACAIBO, July, 1931.

A STUDY of Venezuela's production, exports, construction, exploration and exploitation work for the first six months of the current year clearly reveals the fact that this country is the World's leader in voluntary curtailment of petroleum production. Operations in Venezuela have been reduced to the very minimum, although recent discoveries have increased the productive possibilities of the country on the whole. We find for that reason, that very little acreage is being returned to the Government, these valuable concessions being retained by the various holding companies for development, if and when an improvement takes place in the petroleum market.

Notwithstanding the fact that two new large fields have recently begun exporting—The Tarra field of the Colon Development Company, Ltd., and the Quriquire field of The Standard Oil Company of Venezuela, in addition to two small fields—the El Mene de Acosta field of the Tocuyo Oilfields of Venezuela, Ltd., and Las Palmas, also of The Standard Oil of Venezuela, it is estimated that Venezuela's total production for 1931 will not exceed 125,000,000 bbl. as against the 141,652,852 bbl. produced in 1930, and 138,914,552 bbl. in 1929. (Ministry of Fomento figures. Complete figures by company output for 1930 were published in WORLD PETROLEUM for June).

It has been possible to restrict production in this country and prevent unnecessary waste and increase of over ground storage, due no doubt to the fact that the present producing companies, which are numbered among the largest companies of the world, have been cooperating fully with each other, a course resulting naturally in wise economy and saving.

Venezuela is in an excellent and enviable financial position, and is perhaps the only country that has not been threatened with the unrest recently sweeping over the South American continent. Venezuela is also the only Latin country in the world that is not financially indebted in any way to any other country. With the recent resignation of Dr. Juan Baptista Perez as President of Venezuela, General Juan Vincente Gomez was unanimously elected to the Presidency by Congress following the expressed wishes of the peoples of Venezuela in every District and every State. His official acceptance, much to the satisfaction of Venezuelans and foreigners alike, was the cause of great festivity throughout the entire Republic. The inauguration took place on July 13, and the day was decreed a national holiday. The new Cabinet as appointed by General Gomez is as follows:

C. C. McDermond

Minister of the Interior: Dr. Rafael Tinoco.
Minister of Foreign Affairs: Dr. Pedro Itriago Chacin.
Minister of Finance: Dr. Efrain Gonzalez.
Minister of Industry (Fomento): General R. Cayama Martinez.
Minister of Public Instructions: Dr. R. Gonzalez Rincones.
Minister of Public Works: Dr. Melchor Centeno Grau.
Minister of War and Marine: General Eleazaz Lopez Contreras.

The four major exporting companies of Venezuela namely, Pan American, Gulf, Standard Oil, and Royal Dutch-Shell, have so stabilized shipments that fairly accurate estimates could be made of shipments for the balance of the year. The chaos with which the petroleum industry is now faced had been foreseen by those companies now exporting crude from Venezuela, as well as the dire need of cooperating in an effort to govern production; so that it was not a very difficult matter for them to have arrived at an amicable agreement restricting further construction of tank storage or increasing tansportation facilities. In effect any proposed plan based on voluntary restriction now submitted had long ago been in force in Venezuela.

Lake transportation has been reduced,

Famous seepage which led to the oil discovery at Rio Palmar

the Gulf Company having tied up two of their tankers and the Dutch-Shell in addition to removing some of their smaller tankers from crude transportation and assigning them entirely to handling refined products, have also transferred two or three tankers to the Dutch East Indies.

The only recent addition that has been made to the Lake Maracaibo fleet of tankers is the MARACAY about 317 ft. by 30 ft., which was built recently for the Standard Oil Company of Indiana's subsidiary, Lago Petroleum, and which is due to arrive here at any time. This new tanker is capable of crossing the San Carlos Bar with no less than 27,000 bbl. of crude.

Two complete tabulated charts on the exports and production of Venezuela for the first six months of 1931 accompany this article.

It is well to make a cursory review of recent results obtained in development work in the various fields of the Basin, as well as the wildcats which have been drilled.

There is no gainsaying the fact that an important pool has been discovered in the district of Colon, and the Los Manueles and Tarra Fields in the district of Colon, bordering the Colombian boundary can justly lay claim to being the third largest producing area of the country. Due to the encroachment of water last spring it was believed that they would encounter very serious difficulties in maintaining a production which would have made the investment a paying proposition, instead of the 500,000 to 600,000 bbl. ration which had been anticipated, last year's exports ran less than 400,000 bbl. for five months and less than 450,000 bbl. for another three months. It is gratifying to report that the water difficulty has been successfully solved in Tarra, and in addition the Los Manueles section to the North has exceeded all expectations. The Colon Development Company now estimates that it will be able to run its 20,000 bbl. a day pipe line at maximum capacity for some time to come—and at least for the next year to eighteen months—without further drilling.

Another new field, in respect to exports, was established in June with the commencement of shipments from the Tocuyo Oilfields of Venezuela, Ltd. This new field which is called "Mene de Acosta" located in the district of Acosta, State of Falcon, is perhaps the only one in Venezuela where recent shallow-well operations have not lived up to expectations; but it is interesting to note nevertheless that they have been maintaining a very steady rate of production, averaging 16,000 bbl. a month. Deeper drilling is now being tried out.

In its Eastern Venezuelan operations the Standard Oil Company of Venezuela is said to have spent far more money than any other individual company in Venezuela. Shipments from their field, Quiriquire, located in the district of

Caribbean Petroleum's camp, "Hollywood," at Mene Grande

Piar, State of Monagas, began in the month of September, 1930, and up to the present time they have been able to maintain an average of approximately three ocean-going tanker loadings per month amounting to between 65,000 and 80,000 bbl. each. That this field will have a long life, giving production for some time to come, is generally maintained throughout the Basin. To strengthen this belief is the fact that while the Company plans on maintaining the present rate of production, it has decreased its drilling program in Eastern Venezuela from five or six rigs to but two,—one of which is lying idle on a well located quite a distance east of the present producing area, while the other well is sidetracking at the present time due to an unsuccessful fishing job.

The Standard Oil Company of Venezuela has also discontinued all drilling in the new Las Plamas field, located in the eastern part of the District of Buchivacoa, where they are now producing only 10,000 to 15,000 bbl. monthly. This oil is piped via the British Controlled Oilfield's lines to the terminal at La Estrada, where it is loaded on one of the company's three lake tankers, and discharged at the La Arriaga refinery located close to the city of Maracaibo.

In line with their present curtailment of operations and also in effecting economies between the two companies, the Hombre Pintado wells, located in the district of Buchivacoa have been handed over to the B. C. O. by the S. O. V.

Both La Paz and Concepcion fields have proved more productive than had been anticipated at first. In the latter field, due to new production in the north of the oil producing field, production has been increased from around 300,000 bbl. to over 400,000 bbl. a month, and at one time averaged 550,000 bbl. per month. In the small La Paz field where production during 1930 had been averaging 10,000 bbl. a month, we now find that due to the big production coming from two of the most recent wells completed, the actual production for last month exceeded 80,000 bbl. Drilling has been discontinued in this field.

As outlined in the annual report of the British Controlled Oilfields, Ltd.,

Venezuelan Crude Production for First Six Months of 1931

Company	January (Barrels)	February (Barrels)	March (Barrels)	April (Barrels)	May (Barrels)	June Barrels)	Total (Barrels)
Lago Petroleum Corp.	2,944,000	2,637,000	2,927,000	2,569,000	2,662,000	2,600,000	16,339,000
Venezuelan Gulf	2,415,000	2,190,000	2,308,000	2,039,000	2,103,000	2,103,000	13,158,000
Caribbean	1,022,000	834,000	931,000	981,000	1,004,000	971,000	5,743,000
British Controlled	157,000	142,000	159,000	155,000	157,000	157,000	927,000
Venezuelan Oil Concessions	2,966,000	2,831,000	3,074,000	2,724,000	2,766,000	2,726,000	17,087,000
Standard Oil Co. of Venezuela	270,000	245,000	281,000	249,000	233,000	230,000	1,508,000
Colon Development	630,000	615,000	714,000	570,000	644,000	637,000	3,810,000
Richmond Petroleum	5,000	3,500	4,600	3,400	4,000	2,500	23,000
N. Y. & B. Company	10,000	7,700	8,500	6,200	5,700	5,500	43,600
Tucuyo Oilfields	16,000	15,000	14,000	15,000	14,000	15,000	89,000
Total	10,435,000	9,520,200	10,421,100	9,311,600	9,592,700	9,447,000	58,727,600

Venezuelan Crude Exports for First Six Months of 1931

Company	January (Barrels)	February (Barrels)	March (Barrels)	April (Barrels)	May (Barrels)	June (Barrels)	Total (Barrels)
Caribbean Petroleum Co.	818,000	830,000	692,000	835,000	834,000	580,000	4,589,000
B. C. O.	143,000	169,000	192,000	161,000	140,000	144,000	949,000
V. O. C.	3,000,000	2,750,000	3,127,000	2,756,000	2,860,000	2,700,000	17,193,000
Venezuelan Gulf	2,120,000	1,573,000	1,597,000	1,309,000	1,409,000	1,528,000	9,536,000
Lago Petroleum Corp.	3,500,000	3,116,000	3,511,000	2,420,000	2,637,000	2,607,000	17,791,000
Creole Petroleum Corp.	512,000	607,000	720,000	543,000	636,000	640,000	3,658,000
Colon Development Co.	560,000	603,000	601,000	591,000	617,000	606,000	3,578,000
Tucuyo Oilfields	.....	40,000	.....	40,000	40,000	.....	120,000
N. Y. & B. Company	.....	.....	30,000	57,000	.....	.....	87,000
Cia. Espanola de Petroles	.....	.....	.....	104,000	80,000	100,000	284,000
Total	10,653,000	9,688,000	10,470,000	8,816,000	9,253,000	8,905,000	57,785,000

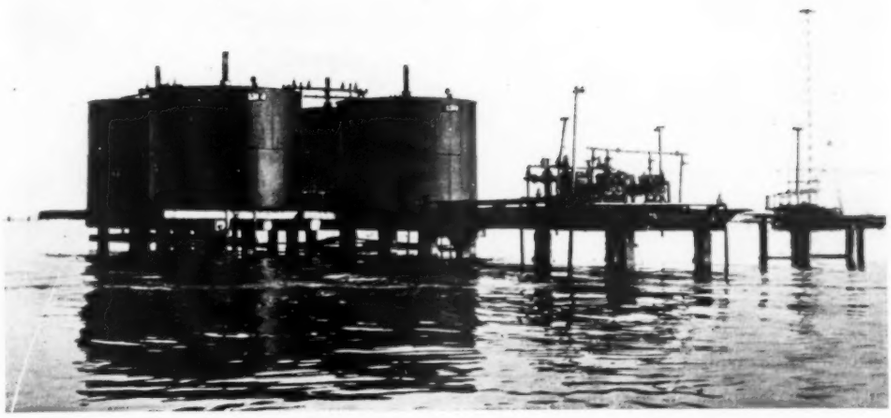
Venezuela Oil Statistics, Producing Fields, First Six Months of 1931

Company	Field	LOCATION		No. of Wells Producing	METHOD				Approx. Daily Prodn. (bbls.)
		District	State		Flowing	Air Lift	Gas Lift	Pumping	
Lago Petr. Corp.	Cabimas	Bolivar	Zulia	68	32	8	24	4	15,000
V. O. C.	"	"	"	181	98	..	60	23	36,000
Gulf Oil Company	"	"	"	75	47	4	..	24	10,000
Lago Petr. Corp.	Lagumillas	"	"	100	82	..	18	..	70,000
Gulf Oil Company	"	"	"	114	96	..	18	..	57,000
V. O. C.	"	"	"	121	69	..	29	23	36,000
Caribbean Petr. Co.	Mene Grande	Sucre	"	94	44	..	50	..	32,000
B. C. O.	El Mene	Buchivacoa	Falcon	115	..	..	..	..	5,000
Tucuyo Oilfields	"	Acosta	"	15	25	..	..	..	500
C. D. C.	Tarra & Manueles	Colon	Zulia	13	10	..	..	3	21,000
V. O. C.	La Paz	Mcbo.	"	8	4	..	1	3	2,500
	Concep'n.	Maracbo.	"	81	10	.	21	50	17,000
Creole	Quiriquire	Piar	Maturin	21	21	..	..	..	7,000
Bermudez Company	Guanoco	"	"	7	7	..	..	..	300
Total				1,013	545	12	221	130	309,300

Record of Footage Drilled in Producing Field of Venezuela (January 1, 1931-June 30, 1931)

Field	Company	District	State	Footage Drilled	No. of Wells	Status of Wells	Producers	Abandoned	Drilling
La Rosa	V. O. C.	Bolivar	Zulia	29,676	23	..	20	2	1
"	Gulf	"	"	....	..	..	..	.	.
"	Lago	"	"	....	..	..	..	.	.
Lagunillas	V. O. C.	"	"	....	..	..	..	.	.
"	Gulf	"	"	....	..	..	..	.	.
Mene Grande	C. P. Co.	Sucre	"	4,759	4	..	3	.	1
Manueles and Terra	C. D. Co.	Colon	"	14,714	7	..	6	1	.
El Mene	B. C. O.	Buchivacoa	Falcon	9,200	7	..	..	5	2
La Concepcion	V. O. C.	Maracaibo	Zulia	37,085	17	..	15	.	2
La Paz	V. O. C.	"	"	3,000	1	..	1	.	.
Quiriquire	S. O. V.	Piar	Monagas	9,750	7	..	5	.	2
Total				108,184	66	..	50	8	8

Loading a tanker at Cabimas



Crude oil pick-up tanks on Lake Maracaibo

they are now engaged on a very limited drilling program; but, it is interesting to note that the production rate of the field has not fallen off. A number of their wells which had been started in the Western extension of El Mene have been temporarily abandoned, and at present they are only working on two wells—one on a deep test and the other on a well in the Media extension.

Wildcatting results recently have been reasonably favorable in Venezuela, notwithstanding the limited number of tests that have been drilled. Of the 13 wildcats that were reported on January 1, 1931, seven have been abandoned.

As further evidence of the curtailment that has taken place in Venezuela, it is to be noted that only five new wildcats have been spudded in during the first half of 1931, two of which have already been completed as producers and each good for 1,000 bbl. per day.

These two are Cumarebo No. 1 and Cumarebo No. 2, both at shallow depths, but the production coming from different sands, thereby showing that there are very good possibilities of bringing in a good field. Of chief interest is the fact that these two wells are located on the northern shores of Venezuela, in the district of Zamora, State of Falcon and close to the shore line. In the event the Standard Oil Company of Venezuela gets a field here one of the main advantages would be that, like the Tocuyo Oilfields of Venezuela, Ltd. in the district of Acosta, they would have no transportation difficulty, as they could very easily erect a terminal for loading direct to ocean going tankers. These faciilties added to the shallow depth at which production was encountered together with the high gravity of the oil would make a field in that district a sound financial investment.

It might also be mentioned that the Union National Petroleum Corporation's Leon No. 1 located in the district of Silva, State of Falcon, encountered a big volume of dry gas while drilling at a depth of 2,600 ft. A sudden gas blow out took place, and due to friction immediately ignited, burning as high as 30 ft. in the air. The well made approximately 1,000,000 cubic feet of gas flow. It indicates the presence of potential production somewhere in that vicinity. This well is now drilling at a depth of 4,900 ft. and many thin oil bearing strata have been encountered.

It is not only in wildcat areas that drilling has been restricted, but also in the various producing fields; where there are at present only nine rigs in operation, and it is an admitted fact that production could be doubled in most of these fields by engaging in a normal program of drilling.

In addition to the reduction of output it is well known that the companies offsetting each other in the district of Bolivar State of Falcon, have an important agreement regulating the position and spacing of wells, which minimises waste and expenses to the benefit of all parties.

The foregoing statistics give an accurate outline of the curtailment that has taken place in Venezuela, and if it were possible for the producers of the United States to follow the example of Venezuelan operators and agree upon a very definite restriction program, suspending all new construction work, etc., better times would soon return for all concerned in the petroleum industry.

Throughout the entire Maracaibo Basin may be seen quantities of material that has been cleaned, stacked, and stored in a systematic manner—material which was in use two years ago and which is lying idle at this time waiting

Venezuelan Drilling Operations, Producing Fields, July 1, 1931

Company	Field	Well No.	LOCATION District	LOCATION State	Present Depth (ft.)	Status
Std. Oil Co. of Ven.	Quiriquire	Well No. 72	Piar	Monagas	4,225	Idle
Std. Oil Co. of Ven.	Quiriquire	Well No. 74	Piar	Monagas	3,125	Sidetracking
Caribn. Petr. Co.	Mene Grande	Well No. 232	Sucre	Zulia	2,250	Drilling
Ven. Oil Concsns.	La Rosa	Well No. 470	Bolivar	Zulia	1,050	Completing
"	La Concepcion	Well No. 96	Maracaibo	Zulia	2,825	Completing
"	"	Well No. 97	Maracaibo	Zulia	1,975	Drilling
British Controlled	El Mene Field	Well No. 253	Buchivacoa	Zulia	6,050	Drilling
"	Media Extension	Well No. 6	"	"	2,650	Drilling

Construction of railroad from El Mene oilfield to Chicirivche

Summary of Wildcat Operations in Venezuela, Jan.-June, 1931

Company	Well Name	LOCATION District	LOCATION State	Depth (feet)	Status	Being Drilled by:
Venezuela Gulf	Lagunilla No. 1	Bolivar	Zulia	5,475	Drilling	Ven. Gulf
Venezuela Gulf	Neopam No. 1	Perija	Zulia	4,925	Drilling	Ven. Gulf.
Std. Oil Co. of Venezuela	Cumarebo No. 2	Zamora	Falcon	1,800	Completed	Std. Oil of Ven.
Ven. Oil Concessions, Ltd. (Dutch Shell)	Curacao No. 2-A	Bolivar	Zulia	2,925	Drilling	Ven. Oil Concs.
Zamora Ven. Petr. Corp. (Sinclair)	Uzcategui No. 1	Barinas	Zamora	5,525	Temporarily closed down	Zamora Ven. Petr. Corp.
Orinoco Oil Co. (Pure Oil)	Netick No. 2	Maracaibo	Zulia	2,950	Drilling	Orinoco Oil
Paraguana Petr. Corp. (H. L. Doherty)	El Cordon No. 1	Falcon	Falcon	4,150	Drilling	Drilling and Exploration Co.
Coro Petroleum Co. (Std. of California)	Cuelbra No. 1	Democracia	Falcon	6,450	Testing	Coro Petr.
Cal. Petr. Ex. Co.	El Menito No. 3	Bolivar	Zulia	6,425	Drilling	California Petr.
Union National Petr. Co. (Union Oil of Cal.)	Leon No. 1	Silva	Falcon	4,900	Drilling	Marting Engineering Co.
Soc. Francaise de Recherches Au Ven.	Zulod No. 1	Sucre	Zulia	2,860	Testing	Marting Engineering Co.
Cal. Petr. Corp. of Ven.	Las Piedras No. 1	Maturin	Managas	2,125	Drilling	Std. Oil of Ven.

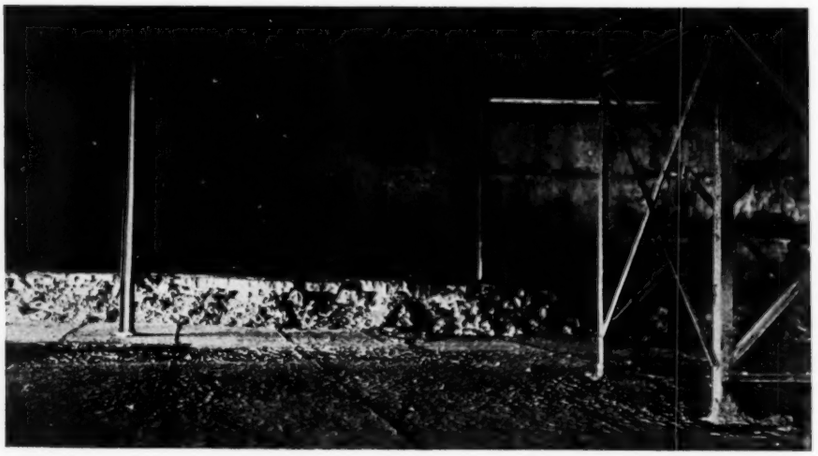
for improved conditions. Not only have producing companies cut down their drilling operations, but, quite a few companies have suspended all active work in Venezuela, retaining at the same time their valuable holdings, which they anticipate exploring and exploiting when sufficient improvement occurs.

To a certain extent it must be conceded that the forthcoming development of the Barco concessions in Colombia may deter active resumption of drilling operations in Venezuela, for since all world markets are already over supplied, production coming from new fields may have an adverse effect on proposed plans for improvement of the market. However, it is gratifying to find that the new work will be in the hands of larger producing companies who certainly will control the production wisely. Moreover, by the time Barco oil reaches the sea, world consumption may have considerably increased.

It is believed that airplanes will play an important part in the geological and engineering survey of the Barco Concession. In this connection, the Standard Oil Company of Venezuela has been the only company in Venezuela to use planes to any extent in oil development. Practically the whole of Eastern Venezuela has been surveyed by the Standard Oil planes, as well as certain parts of the Maracaibo Basin. This work has been completed recently and the results are reported to be most satisfactory. This will be of considerable help in the development of the 500,000 acres in Eastern Venezuela which has been pooled for joint exploration and exploitation by Standard Oil of Venezuela, Lago Petroleum, Sinclair Interests, Cia. Espanola de Petroleos and Venezuela Atlantic Refining Company.

There are also two commercial air transport companies operating in Venezuela at this time; Cie. Generale de Aereopostale, which confines its activities to within the Republic, and the Pan American Airway system. The latter has made rapid strides in the country and has increased its weekly service to and from the United States to three times a week at present. Two planes arrive each week from Maimi via Kingston and Barranquilla, and the third plane connects the United States with Maracaibo by way of the West India Islands also calling at La Guaira and Maturin.

Two years settlement of sand in a Gulf Oil tank at Lagunillas field, Lake Maracaibo



To meet the increasing demand in mail and passenger traffic the Pan American Airways is replacing the present 7-passenger Sikorsky Planes, by larger Sikorskys capable of carrying 10 passengers and which will be much more comfortable.

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Oil Men at Texas Investigation

DURING an investigation by the State of Texas Legislature, a number of leading oil men gave evidence on matters important to the oil industry today.

Underwood Nazro, president of the Gulf Production Company, expressed the view that the law should deal with nothing but actual physical waste, and that the law of supply and demand should not be interfered with. "The condition today is not new," he said, "and will correct itself, and the old law of the survival of the fittest is true of all life." This is similar to the views recently put forward in WORLD PETROLEUM.

R. C. Holmes, president of the Texas Corporation, expressed the fear that a tariff on oil might tie up trade with foreign countries; that if foreign oil is excluded from the United States, domestic money will be invested abroad in an expansion of the facilities of other countries. Mr. Holmes denied that the major companies have formed any combine to force down crude prices, and thereby drive out independent competition. "We may not be able to change the law of supply and demand," he said, "but we can take steps to mitigate its serious aspects and modify and change its course by constructive action."

W. S. Farish, president of the Humble Oil and Refining Company, said that his company realizes about 6.79 cents above purchasing and refining costs for a barrel of oil bought in East Texas for fifteen cents. From one barrel of crude, the Humble company obtains 15.12 gal. of straight run gasoline; 9.75 gal. of cracked gasoline, totalling 24.87 gal. of gasoline, for which they get 2.88 cents per gal.; 3.15 gal. of kerosene sold for 2.97 cents gal.; 0.66 gal. Diesel oil, 2.37 cents gal.; 4.20 gal. fuel oil from crude bottom and 8.69 from a cracked bottom at 47.5 cents per bbl., all giving gross value of $0.9726 to a 42-gallon barrel of East Texas crude, which is an adjusted value of 0.9679 dollars. Manufacturing and refining overhead is 36.35 cents per bbl., leaving a net return of 60.44 cents, from which is deducted 15 cents to leave 45.44 cents, from which is deducted 38.65 cents for pipe line transportation, which leaves a net profit of 6.79 cents on a barrel of 15 cent oil.

International Trade in Lubricating Oils

Analysis of Movements of Lubricating Oils in World Markets, Showing the Relative Importance of Various Importing and Exporting Countries.

By Chester Lloyd Jones.

An analysis of the various branches of the international petroleum trade shows a progressive elimination of certain suppliers as the examination proceeds from crude oil to the refined products and curious appearances or re-entries by others. Great producers of crude are the United States, in a class by itself (896,694,000 bbl. in 1930) followed by Venezuela (141,652,832 bbl.) and Russia (129,955,417 bbl.) as a secondary group. A third group, Persia, Roumania, Mexico and the Dutch East Indies, each produced in 1930 quantities falling between 37,000,000 and 43,000,000 bbl.

When only export trade in crude is considered the order changes radically. In proportion of crude furnished the world market Venezuela, with 127,506,932 bbl. in 1929 takes the rank held by the United States in production. The United States, Colombia, and Persia fall into the second class, each shipping between 11,000,000 and 26,000,000 bbl.[1]

There is hardly a third class. The Dutch East Indies[2] drop out of the reckoning, Roumania reports no shipments, Mexico ships only a little over 200,000 bbl. and Russia less than 1,500,000 bbl.

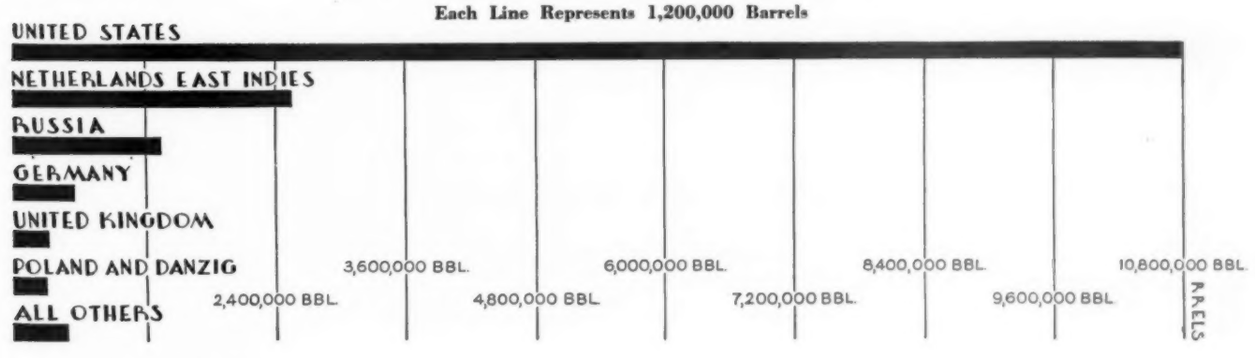
But in international trade in the refined products the picture changes radically again. In gasoline shipments the United States once more assumes a position of preeminence with almost 60,000,000 bbl. in 1930. The Dutch East Indies, Roumania, Persia, and the Dutch West Indies, in order, make a group with from 6,000,000 to 10,000,000 bbl. each in 1929. Again there is hardly a comparable third class for the only units listed as contributing over a million and less than two million barrels are two newcomers in the comparison, British Malaya and Trinidad. South America falls out of consideration.

The elimination is even more marked in the international trade in lubricating oils. The United States is again in the lead, outclassing all other countries with a shipment of 10,775,091 bbl. in 1929, two-thirds of the world trade. Considerably less in quantity, but not in proportion, was shipped by the United States in 1930. The only other major producers of petroleum which remain in the race are the Dutch East Indies, reporting shipments of 2,556,670 bbl. of lubricating oils and grease in 1929,[3] Russia reporting exports of 1,342,045 bbl. and the Dutch West Indies which shipped 965,277 bbl. of straight run lubricating oil distillate, practically all to the United Kingdom and Germany,[4] and in normal years to Roumania.[5] In this trade the South American producers are insignificant and in the same class fall Persia, British Malaya, and Trinidad.

The three great exporters of lubricating oil producing from local crudes have widely contrasted markets. The United States, marketing two-thirds of the lubricating oil which enters international trade sells in practically all the open markets of the world but chiefly in Europe. The Netherlands East Indies finds its best market through the distributing point of Straits Settlements, through Australia and the Philippines. Less important are China and two North Sea markets, the home country and Great Britain. Russia sells chiefly in the West European areas where it meets the United States as its chief competitor.

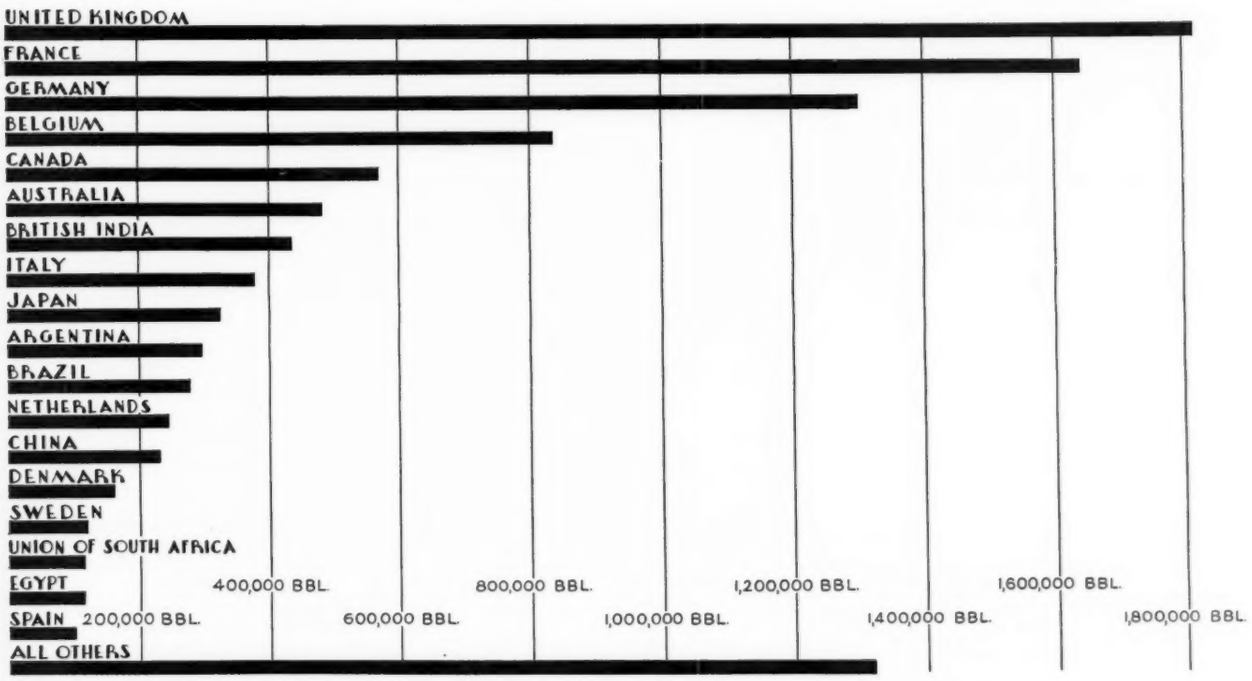
Of particular interest, especially in western European trade, are the exports by a secondary group of contributors made up of Germany, the United Kingdom and Poland, only the latter of which ranks as high as thirteenth

1. The Dutch West Indies are disregarded. They shipped large quantities of Venezuelan crude as re-exports.
2. The Dutch East Indies shipped in 1927 812 bbl. No data available for later dates. Russian shipments of crude and Diesel oils were 1,356,835 bbl. in 1929.
3. These items not separately listed.
4. These shipments are not listed as lubricating oils by the services reporting imports in the United Kingdom and Germany. They are apparently listed there as crudes. In the case of Germany these shipments may be included in those from Venezuela.
5. The position of Roumania in this trade is reported as follows: Exports of lubricating oil, 1928, 435,617 bbl.; 1929, 43,809 bbl.
6. The same is true of Roumania in normal years.



United States Exports of Lubricating Oil in 1929

Each Line Represents 200,000 Barrels



among producers of crude. Nevertheless their combined exports of lubricating oils are not far from equal to those of Russia, the third contributor of the exports of lubricating oil.

Germany stands in the trade in a position by itself. The country has no important crude oil resources but has been steadily increasing its imports of petroleum products. Those of crude doubled in the period 1927-1929, reaching 630,115 bbl. in the latter year. It is a country which is also greatly increasing its imports of gasoline. They rose in the same period from 6,000,000 bbl. to 17,000,000 bbl. Imports of lubricating oils have also increased greatly, to reach 1,960,185 bbl. in 1929.

Now German exports of crude petroleum are negligible, as are also those of gasoline. But the same is not true of lubricants. In sales abroad in this line the country shows great and increasing importance. It exported 381,122 bbl. of lubricating oil in 1927 and 532,798 bbl. in 1929.[1] German exports of lubricating oils in 1929 were 40 percent as great as those of Russia, the greatest petroleum producer of the old world, and reached as far as India where they totalled more than those of the United Kingdom. The widespread character of the German lubricants trade is an excellent illustration of the merchandizing ability of its commercial representatives for only a minor fraction of its total represents raw materials produced in the country.

The United Kingdom, like Germany, is on balance an importer, but exported 295,160 bbl. of lubricating oil in 1929. Unlike the German shipments these are primarily to areas under the control of the exporting country. Poland, a crude oil producer, has an export trade comparable to that of Great Britain, the greater part of which is marketed in Eastern Europe. Its most remarkable feature is that its total is comparable in bulk in 1929 to the exports of gasoline.[2] One barrel of lubricants was shipped to every 1.2 bbl. of gasoline.

The high proportion of Poland's export trade which is represented by the lubricants puts this item in strong contrast to that of the other main suppliers. Roumania ships only one barrel of lubricants to 15 of gasoline, Netherlands East Indies one to almost 8, Russia one to about 6.6 and the United tates one to almost 6.[3]

In comparison with the totals produced, the United States ships a greater portion of the lubricants it manufactures than it does of its gasoline. In 1929 it produced almost 13 barrels of gasoline to one of lubricants but it exported as above indicated, almost a sixth as much oil as gasoline.

The export trade of the United States in lubricants forms so large a part of the total in world trade that its destination gives a good reflection of the most attractive world markets.[4]

The industrial countries of Europe are far more important than any other group in the United States lubricants trade as they are also in that of gasoline. In 1929, 60 percent of the exports had that destination, as did an equal percentage of those of gasoline. But the distribution of this trade among the chief European buyers showed some interesting variations.

1. These are the figures as reported in the export statistics of the countries selling to Germany. The German import figures report much higher total purchases of lubricating oils, reaching 2,706,697 barrels in 1927 and 4,604,872 in 1929.
2. In 1929 Polish gasoline exports were 322,096 barrels, the lubricating oil shipments were 274,293 barrels. In 1927, however, the gasoline exports were 522,948. Regularly lubricating oil exports reach a much greater total compared to gasoline exports than in other producing countries.
3. Figures of oil shipments for 1928 used in the case of Roumania and Netherlands East Indies. Figures for exports of lubricating oils from Persia are not available.
4. It is to be remembered, however, that these figures do not reflect fully the degree to which materials, American in origin, contribute to the supply of lubricating oils to individual areas for part of the lubricating oils shipped find their ultimate markets in other than their first destinations and a portion of the crude oil exported is ultimately marketed as lubricating oil.

Great Britain takes a greater share of our gasoline exports than she does of our lubricants. France takes about the same percentage of both. Germany, on the other hand, takes over four times as great a share of our lubricant shipments as she does of our gasoline. Similar contrasts are shown in the purchases of the lesser customers in which, as in Germany, a share of the imports figures again as exports.

Shipments of lubricants in the foreign trade of the United States outside the industrial area of western and northern Europe are widely scattered. Asia and Australia together make purchases totalling not far from an amount equal to those made by Canada and the Latin American countries. In the former group Australia, British India, Japan and China are the chief buyers. In the latter group Canada, the import trade of which is almost monopolized by the United States, is far the most important market, followed by Argentina and Brazil. After the four leading European countries listed above, indeed, Canada is our best purchaser, taking in 1929 some 568,000 bbl.

In the American export trade in lubricants, far the greater part of the oils shipped is bulk and large package shipments of the red and pale classes. To all countries United States shipments of these grades totaled almost seven million barrels in 1929 compared to 2,875,000 bbl. of cylinder oil, 865,000 bbl. of black oil, 103,000 bbl. of insulating and transformer oils, and 18,818 bbl. of light lubricating oils in small packages.

Though complete statistics for 1930 are not yet available, the information at hand shows that some marked changes occurred in that year compared to 1929 in this branch of United States exports.

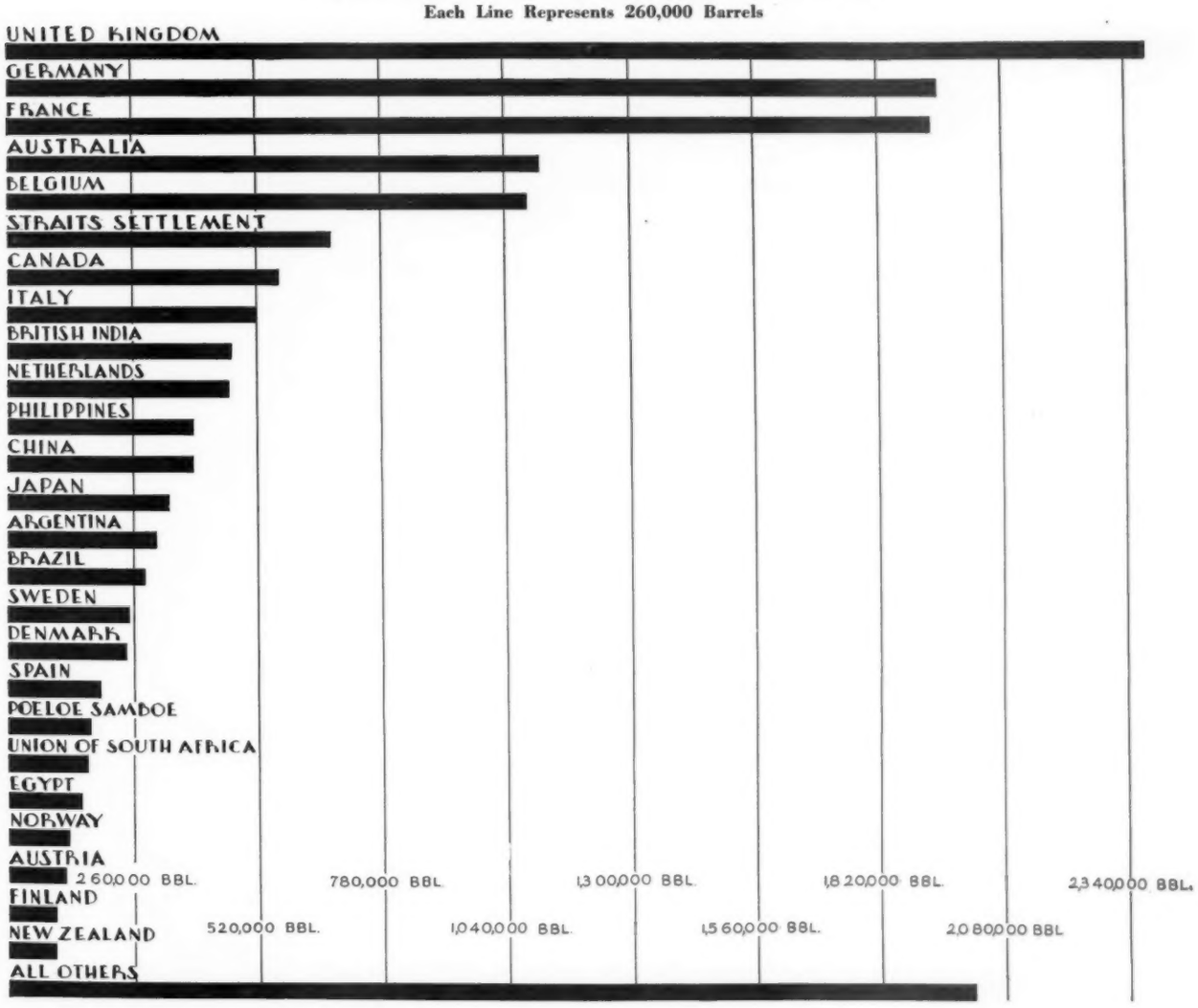
Exports of red and pale oils fell off by more than a million barrels. Purchases by Great Britain, the best customer, increased but French and German buying fell off. The same tendency showed itself in less important markets. These latter, Belgium, Canada, Australia, India, Japan, China, the Netherlands and Italy, all bought more than 100,000 bbl. in 1929, but only Italy increased its purchases of red and pale oils in 1930.

American exports of black oils in 1930, on the other hand, showed an encouraging increase of over 100,000 bbl. India, France, Belgium, and the United Kingdom bought more than the year be-

(Continued on Page 488)

World Imports of Lubricating Oils in 1929

Each Line Represents 260,000 Barrels



International Trade in Lubricating Oil

Compiled from Tabulations by the United States Department of Commerce for the Year 1929.

(Figures represent barrels of 42 U. S. gallons.)

Exports from Algeria

Destination		Barrels
France		535
French Morocco	*	9,350
Tunisia	**	2,210
Other countries	*	6,970
Total		19,065

* 1928 figure used; includes fuel oil.
** Tunisia only.

Exports from Belgium and Luxemburg

Destination	Barrels
Belgian Congo	1,589
British India	63
France	1,918
Germany	763
Italy	651
Netherlands	4,102
Rumania	21
United Kingdom	980
United States	154
Other Countries	6,146
Total	16,387

Exports from British Malaya

Destination	Barrels
Australia	732
British North Borneo	582
Brit. Possns. not named elsewhere	746
Ceylon	992
China	2,258
Egypt	14
French Indo-China	4,181
Hong Kong	249
Netherland East Indies	9,546
Phillipine Islands	145
Sarawak	3,011
Siam	14,802
Union of South Africa	1,383
Other Netherland Islands	1,598
Other Countries *	1,680
Total	41,919

*Includes countries importing less than 500 bbl.

Exports from Ceylon

Destination	Barrels
British India	158
Straits Settlements	1
Bunkers, Ships Stores, etc.	367
Total	526

Exports from Czechoslovakia

Destination		Barrels
Austria	*	2,954
Germany		51,940
Hungary	*	2,338
Italy		581
Yugoslavia	*	2,625
Other Countries	**	238
Total		60,676

* 1928 figures used; includes re-exports.
** 1928 details used where 1929 figures not available.

Exports from Denmark

Destination		Barrels
Finland	*	26,187
Iceland		1,407
Norway	*	15,519
Sweden	*	70,126
Other Countries	†*	6,657
Total		119,896

* 1928 figures used; includes re-exports
† Incl. countries importing less than 500 bbl.

Exports from Egypt

Destination		Barrels
Greece	*	78
Maltogozo Cyprus	*	724
Palestine	*	3,225
Syria	*	1,597
Turkey	*	550
Other Countries	*	3,197
Total		9,371

* Includes grease and re-exports.

Exports from France

Destination	Barrels
Algeria and Tunisia	27,991
Belgium	5,324
French Indo-China	477
French Morocco	1,110
Germany	2,512
Italy	262
Madagascar	774
Poland and Danzig	51
Spain	382
Switzerland	1,317
United Kingdom	250
United States	72
Other Countries	2,249
Other French Africa	1,089
Ships Stores, Bunkers, etc.	739
Total	44,599

1928 figures; 1929 figures not available.

Exports from Germany

Destination		Barrels
Argentina		8,768
Australia		3,112
Austria		13,143
Belgium	*	6,827
Bulgaria		2,981
Canary Islands		1,128
China		3,898
Czechoslovakia		26,262
Denmark		18,383
Egypt		6,047
Finland		26,825
France		5,349
Greece		3,138
India		63,254
Irish Free State		2,836
Italy		16,571
Japan		10,550
Latavia		4,057
Netherlands		53,976
Netherlands East Indies		1,909
Norway		13,707
Poland and Danzig		5,947
Portugal		7,535
Roumania		5,305
Sarre Basin		2,083
Spain		13,048
Sweden		53,250
Switzerland		22,854
Turkey		2,094
United Kingdom		85,378
United States		16,267
Yugoslavia		1,278
Other Asia		1,734
Other Countries		23,304
Total		532,798

*Includes Albania.

Exports from Hungary

Destination		Barrels
Austria	*	2,310
Germany		1
Rumania	*	216
Yugoslavia	*	1,359
Other Countries	*	16
Total		3,902

* 1928 figures; no figures available for 1929

Exports from Mauritius

Destination		Barrels
Kenya		7
Union of South Africa	*	14
Other Countries		332
Total		353

* Re-exports only.

Exports from the Netherlands

Destination	Barrels
Belgium	2,464
France	231
Germany	2,107
Netherland East Indies	749
Other Countries	966
Total	6,517

Exports from the Netherland East Indies

Destination		Barrels
Australia	*	633,528
British East Africa	*	33,580
British India	*	28,476
British Maylaya	*	13,151
China	*	164,174
French Indo-China	*	16,937
French Possessions in India	*	15,901
Germany	*	86,457
Hong Kong	*	25,252
Netherlands	*	156,580
Norway	*	16,416
Phillipine Islands	*	336,243
Poeloe Samboe	*	171,857
Sarawak	*	1,873
Siam	*	11,820
Straits Settlement	*	683,352
Taiwan		892
Union of South Africa	*	32,921
United Kingdom	*	107,064
Other Portugese Africa	*†	2,202
Other Countries	*	17,994
Total		2,556,670

* Includes grease.
† Other than Mozambique.

Exports from Peru

Destination	Barrels
Argentina	7
Bolivia	290
Chile	9,114
Colombia	656
Ecuador	7
Other Countries	48
Total	10,122

Exports from Poland and Danzig

Destination		Barrels
Austria	*	49,356
Belgium		63,150
Czechoslovakia	*	61,933
Finland	*	1,931
France		8,062
Germany	*	21,407
Hungary	*	3,595
Sweden	*	8,339
Switzerland	*	12,080
Other Countries	*	51,125
Total		280,978

* 1928 details used where 1929 figures not available.

Exports from Porto Rico

Destination	Barrels
Cuba	12
Dominican Republic	310
French West Indies	7
Virgin Islands	284
Total	613

Exports from Roumania

Destination	Barrels
Algeria and Tunisia	8,169
Austria	51,044
Belgium	3,759
Bulgaria	47,103
Egypt	31,276
France	14,735
Germany	65,401
Greece	11,704
Hungary	33,166
Italy	76,223
Syria	511
Turkey	15,043
United Kingdom	61,691
Yugoslavia	14,399
Other Countries	1,393
Total	435,617

1928 figures and total used; 1929 total given but apparently erroneous.

Exports from Russia

Destination	Barrels
Africa	1,263
Belgium	* 195,657
Bulgaria	1,373
Denmark	62,155
Estonia	4,154
Finland	6,189
France	138,449
Germany	423,467
Italy	48,286
Latvia	** 8,322
Manchuria	3,547
Persia	4,795
Spain	72,513
South America	34,541
Turkey	8,928
United Kingdom	327,805
Bunkers, Ships Stores, etc.	601
Total	1,342,045

* Includes colonies.
** Includes Lithuania.

Exports from Sweden

Destination	Barrels
Denmark	2,129
Finland	2,202
Germany	299
Iceland	24
Norway	211
Other Countries	220
Total	5,085

1928 figures used; 1929 figures not available.

Exports from Switzerland

Destination	Barrels
Austria	47
Czechoslovakia	47
France	23
Germany	95
Italy	6
Poland and Danzig	5
Spain	4
United Kingdom	7
Other Countries	135
Total	369

Exports from Taiwan

Destination	Barrels
British North Borneo	* 32
China	* 169
Japan	5,364
Other Countries	38
Total	5,603

* 1927 figures used where 1928 and 1929 figures are not available.

Exports from Trinidad and Tobago

Destination	Barrels
British Guiana	* 57
Canada	1
French West Indies	** 2
Surinam	* 47
United Kingdom	12
United States	** 77
Venezuela	* 326
Other British West Indies	* 337
Bunkers, Ships Stores, etc.	* 154
Total	1,013

* Includes re-exports.
** Re-exports only.

Exports from the United Kingdom

Destination	Barrels
Anglo-Egyptian Sudan	3,663
Argentina	14,198
Australia	5,380
Belgium	4,585
Brazil	3,354
British India	2,547
British West Africa	11,821
Canada	5,210
Ceylon	1,247
Chile	3,898
Denmark	* 7,800
Egypt	4,100
France	27,889
Germany	2,453
Greece	1,942
Hong Kong	144
India	** 19,742
Iraq	9,721
Irish Free State	48,794
Italy	3,196
Kenya	4,170
Netherlands	7,358
Netherland West Indies	1,831
New Zealand	4,069
Norway	5,927
Persia	2,180
Portugal	891
Portugese East Africa	3,852
Spain	3,997
Straits Settlements	2,150
Sweden	2,063
Turkey	1,379
Union of South Africa	11,404
Uruguay	377
Other Countries	*** 32,128
Total	265,460

1928 figures used; includes re-exports.
* Includes Faroe Islands.
** Bombay and Karachi; Madras; Bengal, Assam, Bihar, and Orissa; Burma.
*** Incl. countries importing less than 500 bbl.

Exports from the United States

Destination	Barrels
Algeria and Tunisia	20,904
Argentina	296,338
Australia	481,699
Austria	3,648
Barbados	921
Belgian Congo	4,913
Belgium	835,208
Bermudas	764
Bolivia	7,606
Brazil	278,750
British East Africa	23,750
British Guiana	827
British Honduras	998
British India	436,975
British Maylaya	56,282
British Oceania	3,185
British West Africa	633
Bulgaria	2,866
Other British West Africa	† 6,817
Other British South Africa	†† 7,423
Other British West Indies	5,367
Canada	567,877
Canary Islands	5,081
Ceylon	10,880
China	232,728
Chile	70,962
Colombia	19,747
Costa Rica	1,942
Cuba	94,786
Czechoslovakia	4,575
Denmark	160,942
Dominican Republic	7,694
Ecuador	5,310
Egypt	114,716
Estonia	1,270
France	1,642,496
Finland	40,480
French Guiana	1,105
French Indo-China	15,371
French Morocco	14,976
French Oceania	1,208
French West Indies	1,736
Other French Africa	14,936
Germany	1,303,283
Gold Coast	6,190
Greece	25,096
Guatemala	4,129
Haiti	2,210
Hawaiian Islands	* 41,393
Honduras	44,327
Hong Kong	40,634
Hungary	1,504
Iceland	937
Iraq	1,525
Irish Free State	4,244
Italy	377,223
Jamaica	6,138
Japan	321,877
Java and Madura	68,636
Kwantung	44,023
Latvia	13,359
Madagascar	3,854
Malta, Gozo, and Cyprus	417
Mexico	76,454
Mozambique	45,003
Netherlands	243,853
Netherland West Indies	5,265
Other Netherland West Indies	14,484
Newfoundland	5,554
New Zealand	97,505
Nicaragua	3,600
Nigeria	5,455
Norway	73,726
Palestine	2,133
Panama	12,352
Paraguay	1,795
Persia	676
Peru	19,317
Phillipine Islands	67,788
Poland and Danzig	4,216
Portugal	45,904
Other Portugese Africa	7,360
Roumania	12,178
Salvador	2,629
Siam	8,287
Soviet Russia in Europe and Asia	1,559
Spain	101,457
Other Spanish Africa	1,504
Surinam	912
Sweden	119,529
Switzerland	4,149
Syria	4,231
Trinidad and Tobago	5,317
Turkey	9,371
Union of South Africa	118,981
United Kingdom	1,815,495
Uruguay	34,699
Venezuela	19,358
Virgin Islands	582
Yugoslavia	** 4,420
Total	10,816,475

* Hawaiian import figures used.
** Includes Albania.
† Other than Nigeria and Gold Coast.
†† Other than British South Africa, which includes British Southwest Africa and Union of South Africa.

In addition to the countries mentioned above, Alaska re-exported 321 bbl. to Canada; New Zealand shipped 1,263 bbl. to Australia; Iraq exported 1 bbl. to India and 37 bbl. to Persia; and Norway exported a total of 912 bbl. to other countries, details of which are not given.

Total international trade in lubricating oils is, therefore, 16,576,059 bbl. for 1929.

(Continued from Page 485)

fore but in this line Italian purchases hardly held their own.

Cylinder oils were sold abroad in almost identical quantities in the two years in a very irregular market. Among the countries which in the previous year had bought 100,000 bbl. from United States exporters, losses were recorded in 1930 in shipments to Germany, Australia, Argentina, Canada, Belgium and Brazil. On the other hand the United Kingdom, France, and Italy increased their purchases.

The import trade in lubricating oils finds its most important outlet in Europe. All but a minor fraction of the purchases on the continent are confined to four countries; United Kingdom, Germany, France, and Belgium, the first two of which, as has been indicated, figure also in the export trade. Australia is the only other million barrel market.

In the total international trade in lubricating oils, which in 1929 reached 16,119,543 bbl., five leaders, including the four above and Australia, took 8,441,241 bbl. or over 52 percent. Twenty other markets in Europe took 2,074,846 bbl. or about 13 percent.

The balance of the trade—roughly 35 percent—finds its chief markets in India and Eastern Asia, 19 percent; Argentina, Chile, and Brazil in South America—over four percent, and Canada, about three and a half percent. The remaining less than nine percent of the total is scattered over a large number of minor markets.

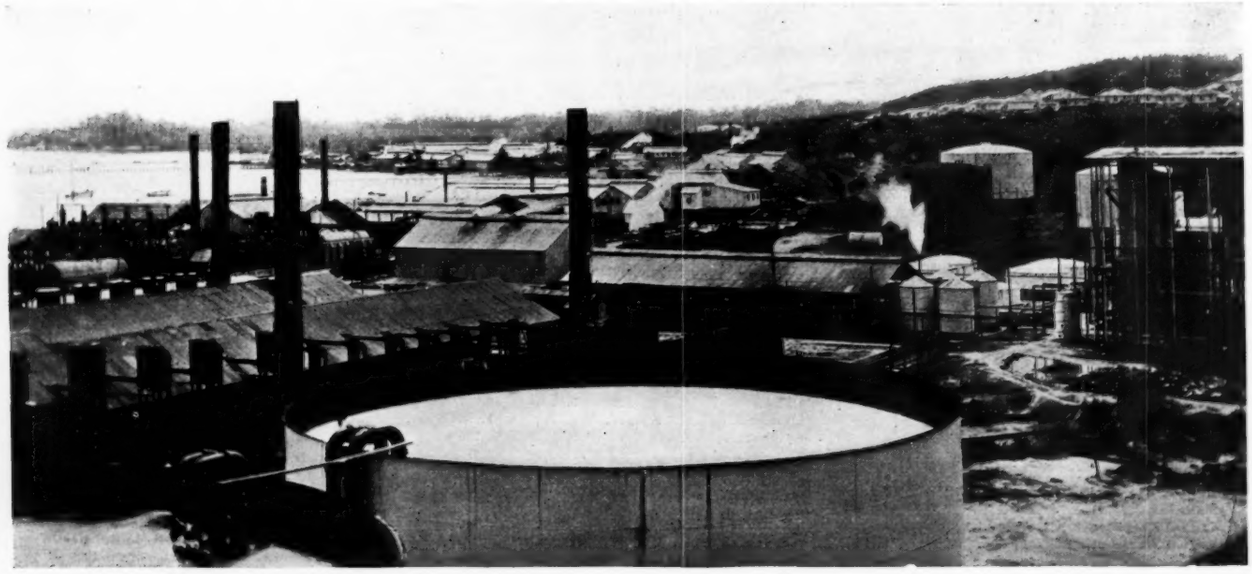
This picture of distribution is interesting both because of the degree to which the chief industrial countries take the lubricants of the world and also because of the very large number of smaller markets which play some role in building up total sales.

It is, of course, evident that in international trade in lubricants there is a less close connection with the automobile industry than in the case of gasoline because of the wide use of lubricants in industrial and other machinery not run by gasoline motors. As a consequence the trade is, in its minor items, even more widely dispersed than that in gasoline and even in certain industrial countries is of greater relative importance than is to be expected from the number of automobiles there operated.

The relation between the use of automobiles and the import trade in lubricating oils is affected, of course, not only by the general industrial uses but by the local manufacture of lubricants and by the export and re-export which occurs in these lines. Nevertheless the contrast which shows itself in this branch of international trade and that in gasoline is significant.

After the United States the five greatest users of automobiles in order of registration are; the United Kingdom, France, Canada, Germany, and Australia and Tasmania. These five countries are also the greatest consumers of gasoline. But there are outstanding contrasts in industrial organization and in the import trade of these countries which find an even stronger reflection in the lubricants trade than in that of gasoline. The United Kingdom has more automobiles than any other country of Europe. It is also the greatest importer of gasoline, but as an importer of lubricants it falls far behind Germany. France and Canada have about an equal number of automobiles and apparently consume about equal amounts of gasoline, but France purchases about three times as great an amount of lubricants in the international market. Germany has only about half as many automobiles as France but for reasons already indicated its purchases of lubricants are little short of 2,000,000 bbl. greater. Finally, Australia and Tasmania, which have 90 percent as many automobiles as Germany, purchase less than 8 percent as much lubricating oil.

Evidently the trade in this branch of petroleum products necessitates a far more developed merchandising organization than either the market for crude oil, which from its nature is relatively simple, or that for gasoline, which follows to so high a degree the use of the gasoline motor. Lubricating oil distribution, though it is largely concentrated in the main industrial areas, reaches into all lines of industry and develops outlets which are in some cases open in only slight degree, if at all, to the other main branches of the petroleum trade. To a greater degree than other lines, its success depends upon the efficiency of the sales efforts of those who offer it on the markets of the world.



Part of Batavia Petroleum Company's 35,000 bbl. daily capacity refinery at Balik Papan, S. E. Borneo, where a new sulphuric acid plant is under erection.

Cracking Venezuelan Crude In Sweden

Farthest North Refinery Erected at Nynasham by Johnson Line Which Imports Venezuelan Crude in Its Own Tankers.

By Paul Truesdell

RECENTLY, the farthest north oil refinery on the globe started operations, producing cracked gasoline and fuel oil. The plant, owned by the well known shipping company, A. Johnson and Company, is located at Nynashamn, Sweden, on the shore of the Baltic Sea, near Stockholm. Nynashamn lies almost exactly on the 60th parallel north latitude, about 425 miles from the Arctic Circle. It is due east from the southern tip of Greenland. In this little coastal town, Louis Nobel, who with his brother Emmanuel Nobel, were the principal owners of Russia's vast oil properties until 1916, now resides.

The building of this refinery is another instance of the establishment of a home refining industry in a European country which has no natural crude oil resources. Cracking units are at work in Belgium, France, England, and Italy, which also have no extensive crude deposits, as well as in practically every oil-producing country in the world.

The refinery was built primarily to produce asphalt from Venezuelan crude for road-building in Sweden. During the summer of 1930, a Dubbs cracking unit was added. It was built under direct supervision of the Universal Oil Products Company. It consists of a radiant heat furnace, a 10 by 30 foot reaction chamber, a dephlegmator 3 feet 6 inches by 28 feet, a Dow hot-oil surge pump and flashing equipment. Flexibility is incorporated in the design, so that the operation may be carried on either by the non-residuum or the flashing system, depending upon market conditions.

While the nominal daily charging capacity of the unit is 800 bbl., it is now consistently running over 1,000 bbl. a day. The charging stock is Venezuelan crude oil of about 18.5 A.P.I. gravity, brought to the plant's own dock by tanker.

The installation of this cracking plant in Sweden came about in an interesting manner. Charles Almquist, who had spent 18 years in the United States, had returned to his native Sweden. During a large part of his sojourn in the former country he had been superintendent of the Warner Quinlan refinery at Warners, N. J. He was well acquainted with the Dubbs cracking process through supervising its operation at Warners. He approached the head of the Johnson company with a plan to build a cracking unit at a strategic point. Axel Johnson was impressed, and a contract for the unit was let.

The Johnson Line operates vessels between Sweden and the Pacific Coast of the United States. The company's own tankers transport the Venezuelan crude from the Caribbean.

Its Diesel-driven freighters were among the first motorships to carry surplus fuel oil in their double bottoms for filling storage tanks in Sweden where other vessels of the line bunkered.

This crude contains approximately five percent of heavy gasoline. It is run direct to the cracking plant without any preliminary skimming, and makes an excellent charging stock. At present the flashing method of operation is being used to produce gasoline, gas, and fuel oil.

The company is developing its own gasoline distributing organization. The fuel oil is sold in part to the Swedish Navy and for bunkering merchant ships. The remainder is used locally for fuel purposes, or for burning in lime kilns.

This cracking unit at present represents the refining industry of Sweden.

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Imports of Petroleum Into China

Figures of Petroleum imports into China for 1930 are now available for comparison with the imports for 1927-1929 given in our June issue.

	1927 (Barrels)	1928 (Barrels)	1929 (Barrels)	1930 (Barrels)
Gasoline	316,487	479,260	684,318	711,460
Kerosene	4,005,481	6,266,977	5,877,460	4,443,110
Lubricating oil	198,567	304,995	331,588	313,276
Fuel oil	1,210,083	1,696,920	1,497,807	1,272,588
TOTALS	5,730,618	8,748,152	8,391,173	6,740,434

Separating and Mixing Problems

Discussion of Problems Occurring in the Refining Sequence Other Than Those Caused by Distillation.

By Horace M. Weir

Chemical Engineer,
Atlantic Refining Company

LACK of technical papers on physical processes in the operational sequence of refining, other than the most important single step—distillation—should make this excellent contribution to refinery process engineering of the utmost importance to technologists in the petroleum industry. Mr. Weir discusses problems arising from the separation of immiscible liquids and emulsions. His experiences have enabled him to handle this somewhat neglected aspect of refining in an interesting manner.

MODERN petroleum refining is largely a sequence of physical operations finally resulting in the separation of a very complex chemical mixture, crude petroleum, into several varieties of less complex mixtures which experience has shown to be well suited for various human needs. It is true that chemical reagents play important parts at certain points in the sequence of separation; but, it is also true that successful operation often depends more on sound application of physical facts than on knowledge of chemical phenomena.

In recent years many papers have appeared as a result of study of the most important single physical process, separation by distillation. Curiously enough, relatively little has appeared dealing with the large variety of other physical procedures even though the waste of money involved in inefficient application of known physical facts may loom large in any single refinery.

The present article is a general discussion of some typical separating and mixing problems which appear many times in the operational sequence which the petroleum refiner uses to obtain his marketable products.

Separation of Immiscible Liquids

THE problem of this character most generally presented to a refiner is the separation of water from distillates or from crude oil—a mixture of two so-called immiscible liquids. Typical problems relating to the separation of partly miscible liquids are presented in the extraction of oils with certain solvents such as sulfur dioxide or substituted benzine ring compounds, for example, nitro-benzol, phenol, etc.

The two problems are alike in that the only separation which can be affected is that of a lower specific gravity, and higher specific gravity fluid containing different proportions of the two or more liquids present. Batch separation only requires containers, which are preferably arranged so that the final cut or separation can be made when the plane of the separating interface of the two liquids is as small as possible. This is usually obtained by providing cone bottom tanks and a valve, which is mechanically operated when the lower liquid

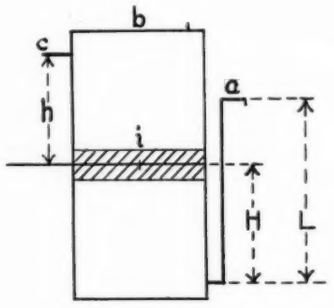

Fig. 1a

layer has been completely drawn off through the apex of the inverted cone.

In large scale operations it is usually true that continuous separation of the two layers is more effective than batch separation, a fortunate circumstance since the flow sheets of the processes producing or utilizing the liquids to be separated are generally continuous in modern refinery practice. In most practical cases the force of gravity exceeds the opposing forces of interfacial tension phenomena at the surfaces of separation of the unsettled mixture to an extent which makes continuous separation by gravity possible in equipment of economic size.

The original cost, depreciation, repairs, and labor on gravity separators are relatively low and wherever such equipment is at all applicable it is difficult to show savings accruing from power driven rotating equipment such as centrifuges. The smallest volume of gravity separation equipment effective for any given problem is obtained by delivering the mixture continuously to the interface which sets itself up between an upper and lower volume of a tank fitted with automatic inlets and outlets.

Figure 1A is a sketch of this well known type of equipment in a form suitable for continuous separation under atmospheric or slightly higher pressure. The element which positions the interfacial zone "i" in the body of the separator "b" is the leg "a" which continuously delivers the heavier liquid. The position of discharge "c" for the light liquids determines the overall height of liquid in the body of the separation and it is obvious that the interface between light and heavy liquids adjusts itself so that the following relation holds:

$$LS = HS + hs \qquad (1)$$

where L = vertical height of leg "a"
h = vertical height of light liquid.
H = vertical height of heavier liquid.
S = specific gravity of heavier liquid.
s = specific gravity of lighter liquid.

If the nature of the materials to be separated, or the requirement of the process in which separation is a step, is such that the operation must be carried out under pressure, equipment illustrated diagramatically in Figure 1B must be used. Float controlled valves V1 and V2 must be used to regulate the flow of each of the separated liquids. It is usually advisable to arrange the float controlling the outlet of heavier liquid in a separate vessel as is shown in Figure 1B. The lighter liquid controlling float may frequently be placed to advantage within the body of the separator itself as shown.

The required volume of the body of the separator for atmospheric or higher pressure cannot be determined by any

general rule. Ideal equations can be given, but practical conditions are never formal ones so that such equations are nearly useless. However, a very simple experiment with the two liquids to be separated enables the designer to orient himself on the required volume of the separator. A two layer system of the material to be separated is formed in a glass vessel so that the plane of separation is level with the inlet from a side tube closed from the main container by a stopcock. An intimate mixture of the two liquids is made in an enlargement of the side tube situated so that the mixed liquid will flow into the main vessel when the stopcock is opened.

After a known volume of the mixture is quickly run into the main vessel by opening the stopcock, the volume of unseparated material remaining in the region of the original plane of liquid interface is noted over a sequence of appropriate time intervals. If it is found that the depth of unseparated mixture layer decreases at the rate of "X" inches in "Y" minutes in this simple experimental equipment it will do likewise in a large continuous apparatus providing allowance is made for the disturbance due to the entering stream. This disturbance may be minimized as much as is usually practical by causing the mixed liquid to enter the separator through holes drilled to discharge horizontally from a pipe cross placed at the desired plane of the interface. The holes should be distributed along the arms of the cross and arranged so that the aggregate area of these small orifices does not exceed 90 percent of that of the feed or delivery pipe.

Where the use of the cross is objectionable due to the probability that corrosion products or sediment carried in the liquid mixture will ultimately seal many of the orifices, a simpler though not equally effective device can be provided. The feed pipe should be led to the separator so that the mixed liquid jet is delivered horizontally against a vertical baffle plate placed three to four pipe diameters away from the orifice at the side of the tank. This baffle plate should be provided with a number of ⅜ inch to ¾ inch holes having an aggregate area double that of the feed pipe and it should be arranged so that it extends both below and above the expected interface depth in the separator.

Separation of Emulsions

UNFORTUNATELY the petroleum refiner encounters emulsions which are so stable that the usual batch separators or simple continuous separators of the type just described would have to be impractically large to effect the required separation. For the most part these emulsions consist of water or salt solutions dispersed in crude oil or fractions of crude oil. Less frequently the emulsion is of the reverse kind—oil dispersed in water. The distinction is drawn from the standpoint that one of the two liquids is always present as a continuous

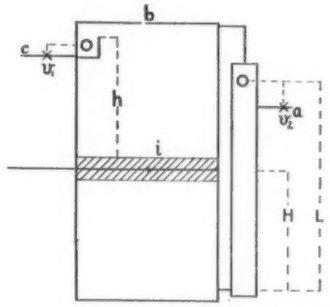

Fig. 1b

phase—the other as discreet or "dispersed" droplets.

It is often true, but always unsafe to assume, that the liquid present in larger volume ratio is the continuous phase. Proper classifications of the type of the emulsion can always be made by bringing a drop of it in contact with one of the other pure liquids. If slight stirring causes ready mixing, as is easily observed under a microscope or sometimes with the naked eye, the continuous phase is the same as the pure liquid chosen.

Two class distinctions can be drawn between the four general methods in successful use for breaking emulsions.

1. Methods which accentuate the forces tending to separate the liquids one from the other.

2. Methods which depend on a reduction of the forces which oppose separation of the liquids.

The most frequently used method of the first class is to substitute centrifugal force for the force of gravity. Centrifuges may be operated at speeds which correspond to forces up to several hundred times that of gravity, and the application of such forces are frequently effective for separation. Nevertheless, the element of a relatively long time may enter into successful centrifuging of a very stable emulsion, making the hourly capacity of the centrifuges so small that processing costs are large.

The electrical precipitation method also falls into class 1 inasmuch as it depends upon substituting the forces of an impressed electric field between two high voltages electrodes for that of gravity. Opposite electrical charges are carried by the components of an emulsion, particularly if one phase is a very poor conductor. If these charges are large, the dispersed droplets may be accelerated in the electric field to a velocity at which the impact of mutual collision ruptures the film of the continuous phase which otherwise keeps them separated.

The mechanics of the electrical phenomena are obscure but it is probable that the charged droplets collect a layer of oppositely charged continuous phase liquid about them. The charges on the resulting tiny spherical condenser are oriented by the impressed field and the surroundings to produce an unbalanced force in the direction of one or the other electrode. In favorable cases the power consumption for electrical precipitation is not large and it is stated that it may only amount to 100 watts per bbl. of oil treated.

(*To be continued*)

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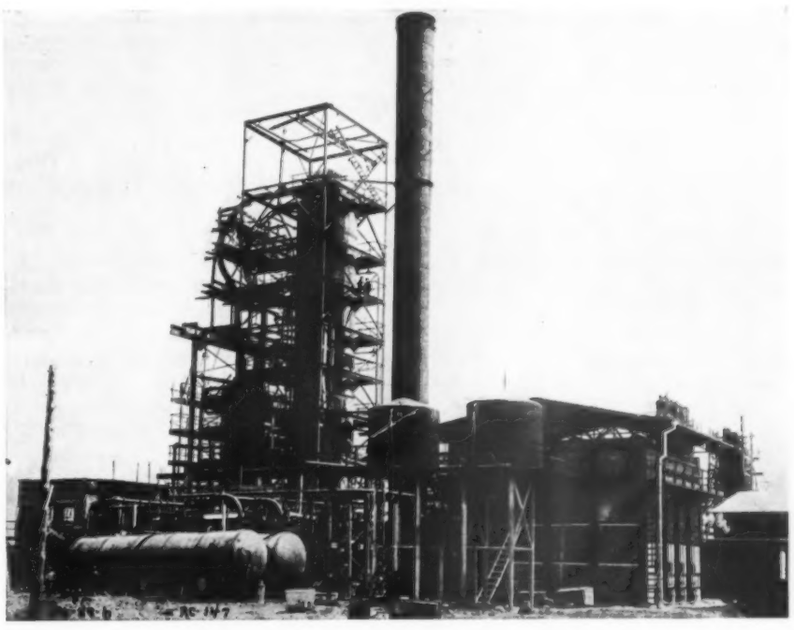
Single stage atmospheric unit completing at Grozni, Russia



Petroleum Prospects of Sakhalin

Japanese and Russians Sole Producers on this Far East Island. An American Concession Cancelled for Non-Development. Output of 11,500,000 bbl. Planned for 1933.

UNTIL the present the Far East has been without sufficient oil production of its own. United States and Dutch East Indies shipped most of the requirements of Japan and China, while Russian Pacific markets have been supplied by tankers from the Black Sea ports, a distance of some 7,000 miles. The development of large oil reserves in the Far East has been, therefore, of primary importance for a long time, especially to Japan, in connection with her navy and her highly developed industries.

Known oil prospects in the Far East are few. In addition to the small oil fields of Japan, oil seepages are known to exist on the north half of Sakhalin Island, on the Kamchatka Peninsula and in isolated and unaccessible parts of the continental Far East. Some reconnaissance surveys were made on the Sakhalin Island following the Russo-Japanese war, but all work ceased during the World War, with no definite results having been achieved.

Sinclair's Concession Cancelled

FOLLOWING the establishment of the Soviet Government, an American company—the Sinclair Consolidated Oil Corporation—obtained a concession for developing oil reserves of the Sakhalin; but this first concession was cancelled for "non-development." The Japanese interests followed the Sinclair Consolidated as concessionaires, the Kita Karafuto Sekio Kaisha securing a concession on 438 square miles, distributed in eleven localities, and further subdivided on the checkerboard principle, the Russian Government retaining the balance of the checkerboard. Considering the extreme climatic difficulties of the Sakhalin, the results achieved by the Japanese have been very satisfactory; Russian developmet, however, has lagged considerably behind the Japanese, principally because of long distances to the supply centers of the oil industry in European Russia. In addition to complete isolation of Sakhalin Island from all transportation routes, its very few harbors are open but four months each year, complicating very much the problems of all supplies and of shipment of its oil production. Severe winters necessitate permanent buildings, as well as enclosed rigs, shops, etc. for protection of men.

One Commercial Field

SO FAR commercial production on Sakhalin Island has been developed from only one field, the Okha, though small wells were drilled elsewhere, while the whole prospective territory along the east coast of the island is estimated as being about 200 miles long and 15 miles wide. Seepages of undetermined importance also exist on the west coast of Sakhalin.

Development by the concessionaire has been rapid, production beginning in 1923, amounted to 6,923 bbl. rose to 130,000 bbl. by 1926 and reached about 1,000,000 bbl. during the 1929/30 operating year; the 1931 plans call for 1,400,000 bbl. Plans of the Soviet management have been most ambitious from the beginning of the development, while the supply of men and machinery has been eminently unsatisfactory, with the result that production so far, has never approached even 50 per cent of the plans. In 1928/29 operating year Russian production on Sakhalin was 230,000 bbl.; 1929/30 it increased to slightly over 400,000 bbl. The estimate for 1931 is 1,820,000 bbl., for 1932—4,900,000 bbl. and for 1933—11,500,000 bbl. All the estimates of future production are excessive and a total of 2,500,000 bbl. by 1933 is more in line with the actuality.

Shallow Wells

THE depth of the oil bearing sands in Okha field is shallow, ranging from 350 to 1,300 feet. The sands are of considerable thickness, up to 150 feet, and to-date, six commercially productive horzons have been uncovered, the three deepest being most promising. Initial production of wells averages about 250 bbl., while settled production ranges from 75 to 100 bl. per well per day. The oil is heavy, measuring 21.5 deg. Be. Producing formations are of Upper Tertiary (Pliocene) Age, structures are very sharp, suggesting small areal extent of individual fields, unless somewhat flatter anticlinal trends are discovered away from the Great Sakhalin mountain range.

Wildcatting so far has been done exclusively by the Japanese company, which recently discovered commercial production in Katangli, where it plans immediate active development. In Nutovo the results of wildcatting have been negative, the concessionaire completing there two "deep" dry holes, the deeper one being abandoned at 3,120 feet. At this time the Japanese company discontinued drilling in new areas, and the Soviet Government is being forced to do the reconnaissance and wildcatting in order to open larger oil reserves, and thus justify the necessarily large capital expenditures on the island.

Thirty Wells in 1931

THE 1931 plans of Japanese concessionaire call for drilling of 30 wells in Sakhalin. Total production is estimated at 1,400,000 bbl., of which amount 135,000 bbl. will be consumed in the fields. During 1931 it is planned to export to Japan 1,420,000 bbl., including 155,000 bbl. to be purchased from the Russian Oil Trust. The concessionaire at this time has two pipe lines, one 8 inches and one 4 inches, from the Okha field to the tidewater, and has storage capacity on the island for 1,400,000 bbl.

In view of extreme difficulties of transport and weather, progress to-date has been very satisfactory, and indicates that in the future larger production may be obtained. Until deeper horizons are proved for large flush production of lighter crude oil, the importance of Sakhalin island and its influence on the Far East markets is still a matter of conjecture. Present development seems to indicate that Sakhalin will develop sufficient production to supply small requirements of Russian Far East, and a small fraction of the Japanese demand; but will not become a world factor in the petroleum industry, unless, as indicated, deep flush production is discovered.

BASIL B. ZAVOICO.

Water White Color in Motor Fuel

Second of a Series of Three Articles Dealing with Reactions of the Public and Jobbers to Color of Gasoline as Reported by Refiners.

By P. Truesdell, G. Egloff and J. C. Morrel

WATER-WHITE gasoline today does not mean what it did a few years ago, according to the experience of a number of refiners who are marketing gasoline over the country and who answered the questionaire sent out to refiners and marketers. The questions asked were published in Article 1 of this series. It appears that the public is gradually being educated to accept good gasoline, even if it not as "white" as spring water.

A few years ago "water-white" meant 30 color Saybolt or, at least, 25 color Today, a large quantity of gasoline is being marketed without difficulty with a color of 21, 20 or even lower.

An executive of one of the large refining and marketing companies on the Atlantic seaboard writes as follows.

"Our manufacturing department finds that we can economically maintain a color of 21 plus or minus in the manufacture of gasoline.

"We do not sell gasoline below 21 color.

"We have had no complaints from jobbers or dealers on account of color of gasoline we have been shipping them."

Another very large eastern refining company also reports that its refineries adhere to a color specification of "21 or better."

A middle western refiner writes:

"We are selling through our own stations gasoline which leaves the refinery with a minimum color of 25. There have been several instances, however, where the color of the gasoline at different bulk plants has dropped below 20 color. We have, however, experienced no difficulty whatever with the buying public on this gasoline."

A refiner operating chiefly in North Texas says:

"At this time I should say that we can get by without any very serious avalanche of complaints, so long as we keep the color above 21. If we get below 21, complaints are sure to pour in upon us. Two or three years ago we were apt to get complaints in serious volume if our gasoline dropped below 25. Even now we keep 25 as a sort of minimum standard. We are not offering for sale any gasoline below 21 color," the letter goes on, "although we are coloring red, green, and blue cracked gasoline for customers who demand color, for the reason that our cracked gasoline will not stand up water-white for any great length of time."

One Mid-Continent refiner has not actually tried to sell gasoline under 26 color, but he says:

"I am of the opinion that a color of, say, 20 would be satisfactory to the general public. It has been my experience that the public pays very little attention to the color of gasoline, and it is principally the selling agencies that insist on the water-white color."

A refinery operating in the South Central part of the country finds no reason to lower its color standard. The letter states:

"We usually sell through our own stations gasoline of about 25 color. This is not because the public has complained about the low color but because we do not find it difficult to obtain 25 color."

Some refiners keep their gasoline color standard up to 25-30 color or better, from the fear that a lower color would bring complaints from customers rather than from actual evidence of public dissatisfaction.

And there are other refiners who have definite evidence of the preference of dealers and motorists.

One of these with many years of marketing experience, now operating in Texas, writes:

"We, of course, would very much prefer if the public would accept a gasoline of 16 color; but, our jobbers demand a color better than 22, and it is our custom to ship 27 to 30 plus color. It has never been possible for us to obtain acceptance from our customers of a product under 20 to 22 color, as invariably they demand an adjustment or refuse the shipment."

A Mid-Continent refiner reports:

"The jobbers to whom we sell, demand and expect approximately 25 color gasoline. We make all our products up to that standard. The extra cost is a considerable item, and we would like very much to be able to sell 16 color gasoline."

A letter from another Mid-Continent refiner tells of a slightly higher minimum standard. He says:

"All of our gasoline leaves the refinery at better than 27½ color."

A medium-sized refinery in California finds its customers particular enough to justify the following statement:

"We sell nothing through our stations, if we can help it, less than 30 plus color. We have had it very definitely and at considerable financial loss called to our attention that the public and the dealers will not accept a gasoline of anything like 16 color."

A Kansas refiner, too, states that his trade insists on 30 plus color product, while an official of a Pacific coast refining and marketing company writes:

"We have never sold gasoline darker than water-white either through our own service stations or to jobbers, and no dyed gasoline except Ethyl gasoline."

As to whether the demand for clearness proceeds primarily from the jobber or dealer, or whether it is the individual consumer's own idea, the refiners' opinions are divided.

Some consider that the public itself is responsible. For example, an official of a large Pacific coast refining and marketing company may be quoted as saying:

"We believe that the public itself demands water-white gasoline rather than that the demand is kept in effect by jobbers in an attempt to obtain a lower price from refiners."

From a medium-sized California refinery comes the following statement:

"The demand for water-white gasoline really comes from the public themselves, and is due to the fact that a large portion of the public has been educated through advertising that if a gasoline is yellowish or dark that signifies doubtful quality or lack of proper refining."

And another refiner in the far West writes:

"We are subject to unnecessary expense in the treatment of gasoline to a water-white color. I am of the opinion

that the objection comes more from the motorists themselves than from the jobbers."

In other sections of the country there are refiners who consider the dealers and jobbers mainly to blame for the emphasis on "water-white" gasoline.

In the East, one large refining company reports:

"Most of the comments that we have had on color have come from jobbers and particularly those who use visible pumps."

Another eastern seaboard refiner and marketer disposes of the matter thus:

"We are satisfied that the public pays relatively little attention to color except when emphasized by the sellers. There is no question in our minds that the color question is kept alive by manufacturers, jobbers and dealers and just as soon as the public are aware of the fact that they can get a first-class gasoline without regard to color, we think this difficulty will disappear."

A third refiner writes:

"The idea of color and emphasis on it, in our opinion is caused by the advertising of the oil companies more than the general public, particularly since the companies going to it so strongly are using visible pumps."

In the Mid-Continent area, one refiner expresses his opinion as follows:

"It is our opinion that the demand for water-white gasoline comes from the jobber or dealer rather than the motorist."

Another Mid-Continent refiner says he finds it impossible to get most of his customers to accept gasoline below water-white color. He says:

"We have never sold any gasoline of a low color. It is my opinion that the ultimate consumer is not greatly interested in color and that the jobber and distributor are really responsible for this requirement in gasoline."

A refiner whose plant is in the southwest thinks, too, that it is not the motorist who worries about the color of gasoline. He writes:

"Frankly, I believe the public has nothing to do with requesting specifically dyed or white gasoline. I think the whole trouble lies with the jobbers of gasoline and with the sales departments of some of the refineries who use the whiteness of gasoline as a sales talk. In fact, I thought we had passed up the color idea several years ago, but on account of market conditions changing daily, there are brokers and jobbers who would complain and try to get a rebate at the least opportunity."

In northern Texas, another refining company finds the dealer responsible. The letter reads, in part:

"In attempting to analyze the source of these complaints as between the dealer and the public, our feeling is that in most instances it is the dealer rather than the public who is the first to find fault with the material. Competition is so keen that the least little defect or apparent defect in a product like gasoline is apt to cause complaint from the dealer."

And this comes from another Texas refiner:

"The main opposition to yellow gasoline comes from jobbers and dealers and our observation indicates that the public is only slightly concerned about the color of gasoline."

Another company in the middle west thinks the jobber is "looking for trouble." An executive of this company says:

"We have had several complaints from dealers and jobbers on the color of the gasoline shipped them. We have, however, not had any specific complaints from the motorist buying the gasoline. The complaints seemingly originate from the jobber in anticipation of trouble. It is our thought that practically all complaints on color come from the jobber or dealer, either because his product has been criticized by a competitor, or because he anticipates trouble."

In the northwest, too, the dealer is thought to be the source of complaint in some cases.

This from a refiner whose product is marketed mostly in the northwest:

"Distributors and jobbers almost invariably refuse or complain about gasoline when the color is darker than 22. We do not believe that this is done for the purpose of gaining concessions in price as a general thing, but principally because the jobber knows that he will get a certain number of customer complaints if his gasoline is noticeably yellow in visible pump bowls."

And another northwest refining company says:

"I think that jobbers and dealers frequently use the water-white standard as a club to force concessions from refiners by rejecting cars on the claim of off-color. I know that many unethical jobbers are guilty of this practice."

There are those refiners, however, who find that the full responsibility for insistence upon water-white standard belongs to neither the dealer nor the public, but is shared between them.

An Oklahoma refiner puts it this way:

"The cost of treating our cracked gasoline to water-white stable color is comparatively low and our experience indicates that the demand for water-white gasoline comes from both motorists and jobbers—perhaps about 50-50. Of course, some jobbers buy on price only and sell to a class of trade that is not so particular."

Both dealer and public demand water-white gasoline, in the experience of another Oklahoma refiner, who writes:

"The public's natural ignorance of the quality of gasoline from an appearance standpoint rejects the yellow gasoline although it may be superior to the water-white product in the neighboring pump."

Here is the experience of another refiner operating a medium-sized plant in Oklahoma:

"We have found that not only the jobber but the majority of the motorists demand a white gasoline. We attempted a short time back to run a percentage of Texas crude, which resulted in a product of 19 color. It was necessary for us to make an adjustment with every jobber to whom this darker color gasoline was shipped, and in many cases we were required to divert the gasoline to our own stations where our own men raised a howl, stating that their customers refused to buy this gasoline at the regular price.

A Mid-Continent refiner states simply:

"The demand for water-white gasoline I believe really comes from the motorist, jobber and dealer."

One Pennsylvania refiner finds the balance indecisive. He expresses his opinion this way:

"I am not satisfied in my own mind whether it is the consuming public that is demanding water-white gasoline or the purchaser in tank car lots. There is one thing I am satisfied of and that is that the consuming public before many years—possibly before many months—is going to buy a great deal of gasoline that will not be absolutely white."

Most of the refiners agree, however, that whoever may be fostering the upholding of a water-white color standard for gasoline, color is at present an expensive and troublesome factor in the marketing of gasoline. The standard has relaxed somewhat, in certain cases, reaching as low as 21 or 20 color, but the education of both public and dealer is a slow process.

One of the most frequently mentioned reasons for the way in which the "water-white" standard clings to gasoline is the use of "visible pumps."

(Article III will be printed next month)

International News and Reports

CRUDE oil from East Texas is being shipped by tanker from Gulf ports into Canada via the St. Lawrence river.

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Several more tankers are to be constructed for the Spanish Oil Monopoly. Tenders will be invited shortly.

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The Lubrication Congress, which opened at Strasbourg on July 17, will be reviewed in WORLD PETROLEUM for September.

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Activity in the world's largest refinery at Curacao has recently slowed up. Only 1,204,217 bbl. of gasoline were exported in May of this year.

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Our front cover picture this month shows the new East Montreal 15,000 bbl. refinery (Winkler-Koch cracking units) of the British-American Oil Company. A fleet of tankers has been chartered to transport East Texas crude from Gulf ports to the plant via the St. Lawrence river, the first cargo arriving June 14.

▼

The AUSTRALIAN MOTORIST declines to gain popularity by a senseless attack on motor fuel prices in Australia, when the Government is the real cause of the existing high cost. The big tariff-tax of 15½ cents per gallon exacts $30,000,000 per year from the motoring public.

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Although exports of gasoline from the United States are believed to have dropped 10 percent for the first half of this year, domestic demand probably increased 5.7 percent. Actual figures will be available later. There was an estimated increase of 6 percent in exports of crude oil.

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France imported a total of 11,487,627 bbl. of petroleum products during the first five months of 1931, as compared with 10,883,332 bbl. during the same period in 1930, i.e., an increase of 604,295 bbl. But the greater quantity cost France Frs. 443,326,000 less than the supply imported during the same period last year.

Argentina has increased its import duties on crude oil. The new duty is 8.3 gold pesos ($0.9648 at par) per metric ton.

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In France there are now almost 2,000,000 automobiles, trucks, buses motor boats and motorcycles. The number of motor vehicles shows a considerable increase over last year, and France now has one automobile for every 27 of its population.

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Recent tanker chartering records show that four times as many fixtures have been made from the Black Sea as from the United States. But, the Soviets as of June 30, 1930, only owned 13 tankers of ocean going type, aggregating 59,532 tons gross.

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The deficit of the French state railways becomes more serious every year. By way of alleviating the strain a new tax of Frs. 20 an hectoliter has been proposed, which will be applied to petroleum products. This new tax is encountering great oposition.

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"If Britannia cannot rule the waves, there is no reason why she should not keep them clean," said Sir Cooper Rawson before the House of Commons on July 29th, in introducing a bill which would require oil carrying ships to free all liquids of oil before discharging the same overboard. He declares that a big quantity of crude oil is discharged into the sea every day drifting to the coast, damaging fisheries and hurting seaside resort business.

▼

Extensive drillings carried out during the past year in northern Venezuela by the Tocuyo Oil Fields, Ltd., have demonstrated that operations have been conducted on an area of transition from sands to silts, and that the area is dispersed by a net work of minor cross faults. 33 wells were drilled with a total footage of 29,822 feet. Of these 27 were completed, 10 being brought into production. It was necessary to abandon 17, one factor being water. Altogether 63 wells have been drilled on the property and the production last year was 199,080 bbl. Deeper drilling is now being tried.

The motor fuel price war has spread to Holland. The price decreased from 18 Dutch cents a liter to 10 cents and later cut to 6 cents, then to 5 cents. It was reported that distributors handling Soviet products started the movement; but apparently it was a number of small distributing companies.

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Investigation of motor fuel prices in the Transvaal will shortly be made by the Union Government, says General Kemp, Minister of Agriculture, who warns oil companies not to try to extract too great a profit, as the government might take over the sale of this commodity.

▼

During the month of June, 1931, the United Kingdom imported 5,730,696 bbl. of crude oil and refined products, a decrease of 580,824 bbl. from the same period last year. For the six months ending June 30, 1931 imports showed a 5.7 percent drop in quantity and 37.3 percent in value, indicating in a striking way how price cutting means profit losses, as the companies delivering the products received $45,780,726 less than they did last year. Imports aggregated 32,970,050 bbl. valued at £15,867,253, compared with 34,964,475 bbl. valued at £25,306,578 for the first half of 1930.

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On July 1st the French Senate discussed and finally ratified the agreement between the French State and the Compagnie Française des Pétroles. Some interesting questions were raised at the time: amongst them that of the C. F. P.'s importing license.

Louis Pineau, Director of the O. N. C. L., in reply explained that the C. F. P. on the one hand was a producing company and the instrument of the French Government; as such it had been given a license of 25 per cent, which would be about equivalent to its initial refinery capacity. On the other hand the C. F. P. had grouped the few remaining independent French companies (who because of their acquired rights might well have constructed refineries of their own), with a view to forming a powerful combination. The C. F. P.'s second licence was given by reason of this arrangement with the other companies, and although it represented 20 per cent of the authorizations delivered on April the 4th, it was not equal to 20 percent of the French consumption. Therefore the C. F. P. according to M. Pineau holds licences not exceeding 35 percent of the authorizations to import crude oil.

The Foreign Oil Legion

J. ELMER THOMAS, well known petroleum economist and consulting engineer, sailed for Europe from New York, August 1, on the ILE DE FRANCE.

▼

G. SCHOLFIELD, purchasing agent of the Caribbean Petroleum Company, left Maracaibo for Curacao, enroute to England for a four months vacation after which he will return to Venezuela.

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H. M. NOEL has been appointed manager of the Jersey Standard's new refinery at Port Jerome, France.

▼

R. J. EICHE, oil field representative of the American Steel Export Company of New York, has returned to the United States after spending over a year in the South American oil fields.

▼

CAPTAIN JOHN WHITE of the Lago Petroleum Company left Maracaibo recently on a vacation to the United States, where he will spend several months with his family before returning to the tropics.

▼

W. GREEN, president of the Lago Petroleum Company, recently visited in Maracaibo on an inspection trip, returned to New York, and plans to leave for Mexico before long.

▼

H. C. ROBERTS, wild cat superintendent, Venezuela Gulf Oil Company, left Maracaibo for New York via Colon. Mr. Roberts expects to spend his vacation in the Southern part of the United States and return to Maracaibo.

▼

C. C. M'DERMOND, well known oil scout of Maracaibo and author of the article on Venezuelan operations elsewhere in this issue, is taking a vacation of 8,000 miles by air travel visiting the following terminals: Barranquilla, Kingston, Miami, Atlanta, Fort Worth, Los Angeles, San Francisco, Seattle, Junea (Alaska), Calgary (Banff), Winnipeg, Chicago, Cleveland and New York returning via West India Islands.

RICHARD AIREY, president of the Asiatic Petroleum Company, Inc., left New York recently for a trip to London where he is visiting his son, an officer of the British navy, who is home on leave after an extended naval cruise.

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PAUL ADAMS, head of the land department of the Venezuela Gulf Oil Company of Maracaibo is spending three months vacation in the States, Mr. Adams will be accompanied by his wife and three sons, upon his return.

▼

DR. W. W. COOK and family, arrived in Maracaibo July 5, accompanied by two nurses. Dr. Cook is the surgeon of the Venezuela Gulf Oil Company hospital and has been vacationing in the States for the last three months, dividing his time between the seashore resorts, of Georgia and research work in the hospitals around Philadelphia.

▼

GOVERNOR "ALFALFA BILL" MURRAY of the State of Oklahoma in his characteristic way, has enforced an original, if drastic, method of improving prices of crude oil, by closing down all wells in his State, except stripper wells, using military force, until the price returns to $1 per bbl.

Governor "Alfalfa Bill" Murray, originator of a unique plan for raising the price of crude.

HOWARD QUINLAN, formerly connected with Gypsy Oil of Oklohoma has been appointed to the position of "jefe" for the new Columbia Oil Company with headquarters at Cucata, from which place all the work on the Gulf Barco concession will be carried on. Mr. Quinlan and a party of engineers and geologists are leaving shortly to open the territory.

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WILLIAM PRATT, assistant to the general agent of the Venezuela Gulf Oil Company is returning to business in Maracaibo after a pleasant vacation spent mostly in the Western mountains of the United States.

▼

CURTIS TYRA, married but a week to Helen Pomroy, nurse for the Venezuela Gulf Oil Company, died June 18 at the terminal hospital following futile efforts to save him from a kidney and liver complication. Mr. Tyra was chief of personell for the company, having worked for many years both in Maracaibo and in Mexico.

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BRIAN ORCHARD LISLE, son of the Editor of WORLD PETROLEUM is spending his summer vacation from school visiting and studying the oil fields and refineries in the Caribbean, through the kind courtesy of the various oil companies operating there. Following his tour of the Royal Dutch Shell Refinery at Curacao, where he went by tanker, young Lisle spent some time at the Venezuela Gulf Oil Corporation's terminal at Bella Vista, inspected the oil fields at Cabimas and Lagunillas, and at the time of writing is in the jungle at Elcuba in the Tara oil fields near the border of Colombia in the head camp of the Colon Development Corporation, watching the oil drilling operations. Later he will proceed to Aruba, where he will visit the new refinery of the Pan-American Petroleum and Transport Company, returning to the United States by tanker. Quite an adventurous trip for a 16 year old boy to make alone.

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U. S. Cracking Plants

Reports as of January 1, 1931 give total daily charging capacity of cracking plants, completed and under construction, in the United States, as 1,950,981 bbl. Aggregate daily capacity of operating plants comprises 82 percent of the total, plants under construction 6 percent, and inoperative plants 12 percent.

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New steam tanker for service on the Great Lakes

▼

SHIPPING

London: August.

TWO motorships, both of them tankers, have recently suffered from severe fires in the engine-room. Both of these cases involved ships bound from Curacao to Europe. Whether the type of cargo they were carrying had anything to do with the fire or not is difficult to say. Reason for the fire is likewise difficult to assess; but the fact remains that underwriters in the London market are now watching tankers very closely, although none have been reported to date since the two above named casualties. Whether the motor tanker is more susceptible to engine-room fire than the steam tanker, is difficult to say. This possibility has been suggested by the chief engineer of a motor vessel operating between New York and the Far East, who reasons that fire may be caused by over-pumping the oil supply tank, causing fuel to run down on to the hot exhaust pipe.

Construction

THE tanker situation generally continues quiet. No further orders of importance have been placed since these notes were last compiled, but as the accompanying table indicates launches are still fairly frequent, as a result of the large number of orders which were placed during the recent boom.

Charter Market

PRESENT quotations for chartering are stated to be 30 to 40 percent below the lowest level ever recorded in the tanker trade and there seems to be practically no demand for space in chartering, the big oil companies being able to satisfy most of their requirements with their own fleets and by making use of vessels employed on long term charters. Present slack conditions are even more definitely illustrated by the fact that a large portion of the present idle tanker tonnage belongs to fleets controlled by the oil companies themselves.

Some companies are running a large number of their steam tankers at reduced speeds. It is to be noted that this is not necessary with motor tankers because of the smaller fuel consumption of these vessels. Other companies are causing their vessels to make detours sailing from the Cape or via Magellan, instead of following the shorter route from Panama or Suez where naturally dues have to be paid. It may be recalled that recent Panama Canal statistics show that even as far back as the month of April the net tonnage of tanker traffic passing through the Canal decreased 18.8 percent in comparison with the corresponding traffic for the same month a year ago. Tankers, it is stated in the report, comprised 15.2 percent of the total commercial transits through the Canal during the month, made up 17.6 percent of the total Panama Canal net tonnage, were the source of 18.1 percent of the dues collected and carried 20.9 percent of the total cargo through the Canal.

Generally speaking, the charter market, particularly in the clean oil business shows its greatest activity from Black Sea ports. A 4,500 tonner was fixed for July loading, Constanza/ St. Louis du Rhone for 6/3½d., while a 7,500 ton motorship was also placed for July, Constanza/U. K. Continent and a 5,500 tonner, July-August loading Constanza/ French Mediterranean 6/- or Russia/ French Mediterranean 6/6d.

One of the most important enquiries for charter in the black oil market has been that for a 13,000 tonner for crude oil from Tampico to Ostermoor at 9/- with option of loading at Venezuela at 8/- July 15 to 31 and a 9,500 tonner with crude oil from Gulf to Port de Bouc has been accepted at 9/-. It is stated that further tonnage is also required for a similar voyage, July-August loading.

Time charter on the whole, as might be expected, is quiet, and with things remaining as they are at present it does not seem that there is any likelihood of improvement. As regards American coasting, things remain quiet here although dark oil tonnage has recently been chartered from Curacao to Northern States at 14 cents per barrel, prompt loading.

Legislation for Tank Explosions

BRITISH HOME OFFICE has recently issued some new rules concerning regulations governing work involving naked flame or the use of red hot rivets in repair work carried on in any part of tankers where inflammable vapour is likely to collect. Practice in this connection has hitherto been largely based upon the requirements of the Petroleum (Consolidation) Act and similar Acts, all of which lay upon the Harbour Authorities the onus of formulating bye-laws concerning the precautions to be observed with respect to ships carrying petroleum spirit while in harbour. These Acts however, did not define very particularly the form which the bye-laws should take and it followed that the practice of different ports showed considerable divergences of opinion in spite of the fact that causes of accidents were generally the same whatever the port might be. The new rules provide that a daily test certificate must be obtained in respect to any tank which last contained oil of a flashpoint below 73 deg. Fahr.. while special precautions are outlined regarding the introduction of hot rivets into any tank which has contained oil, irrespective of its flashpoint.

It is further provided in the rules that before any oil tank is tested for vapor it must be thoroughly steamed out by

Tankers Recently Launched and Completed

Name	Owner	Builder	Type of Engine	Tonnage	Power	Speed Knots	Remarks
PAN EUROPE	Leif Hoegh Oslo	Swan Hunter and Wigham Richardson Ltd., Wallsend	Wallsend-Sulzer Single-screw Diesel	14,000 Dw.	.....	11	Launched June 30
KALMIA	Reder. Transmark Gothenburg	Gotaverken Gothenburg	Gotaverken-B. and W. Twin-screw Diesels	11,410 Dw.	4000 I.	11.65	Ran trials June 20
CONCH	Anglo-Saxon Pet. Co., London	Harland and Wolff, Ltd. Govan	Harland & Wolff-B. and W. Twin-screw Diesels	11,500 Dw.	4200 B.	12½	Launched July 2
MARACAY	Lago Shipping Co.	Harland and Wolff Ltd. Belfast	Twin-screw Steam engines	3,840 G.	1800 I.	10	Completed June
BRITAMOIL	British American Oil Co., Ltd.	Furness Shipbuilding Co., Ltd. Haverton Hill	N. E. Marine triple-expansion engines	2,800 Dw.	.....	10	Completed July
ANNA KNUDSEN	Knut Knudsen O. A. S. Haugesund	Gotaverken Gothenburg	Gotaverken-B. and W. Twin-screw Diesels	.....	4500 I.	11	Launched June
PAN SCANDIA	Leif Hoegh Oslo	Swan Hunter and W. R. Wallsend-on-Tyne	Wallsend-Sulzer Twin-screw Diesels	14,500 Dw.	.....	11	Completed June
OSTHAV	T. Lodding Oslo	Deutsche Werft Finkenwarder	M. A. N. Single-screw Diesel	11,600 Dw.	3100 I.	11½	Launched end of June
CIRCE SHELL	Anglo-Saxon Pet. Co. London	Howaldtswerke A. G. Germany.	Werkspoor Twin-screw Diesels	11,700 Displ.	4000	12½	Launched end of June
HAVFRU	P. Meyer Oslo	Kockums Mek. Verkstad Malmo	M. A. N. Twin-screw Diesels	11,500 Dw.	4600 I.	11	Delivered in June
ECLIPSE	Standard Transportation Co., Ltd.	Scotts Sb. and Eng. Co., Ltd. Cartsburn Shipyard	Quadruple-expansion steam	13,800 Dw.	3600 I.	11	Launched June
BRITISH ENERGY	British Tanker Co.	J. G. Kincaid and Co.	B. and W. Single-screw Diesel	10,400 Dw.	2700 B.	11½	Ran trials June
DAYLIGHT	Standard Transportation Co.	Sun S. B. and D. D. Co.	Sun-Doxford Single-screw Diesel	13,450 Dw.	2800 B.	11½	Completed
HALIOTIS	Anglo-Saxon Pet. Co.	Werf Rijkee	Werkspoor Twin-screw Diesel	2,000 Dw.	1000 B.	11½	Placed in service
TEIYO MARU	Nippon Tanker Kaisha	Yokohoma Dockyard	Yokohoma-M. A. N.	12,200 Dw.	7500 B.	16	Ran trials June
PAN BOLIVAR	Pan-American Petroleum & Tr. Co., N. Y.	Swan Hunter and Wigham Richardson, Ltd., Wallsend	Wallsend triple expansion, and Bauer-Wash	14,000 Dw.	.....	....	Ran trial July

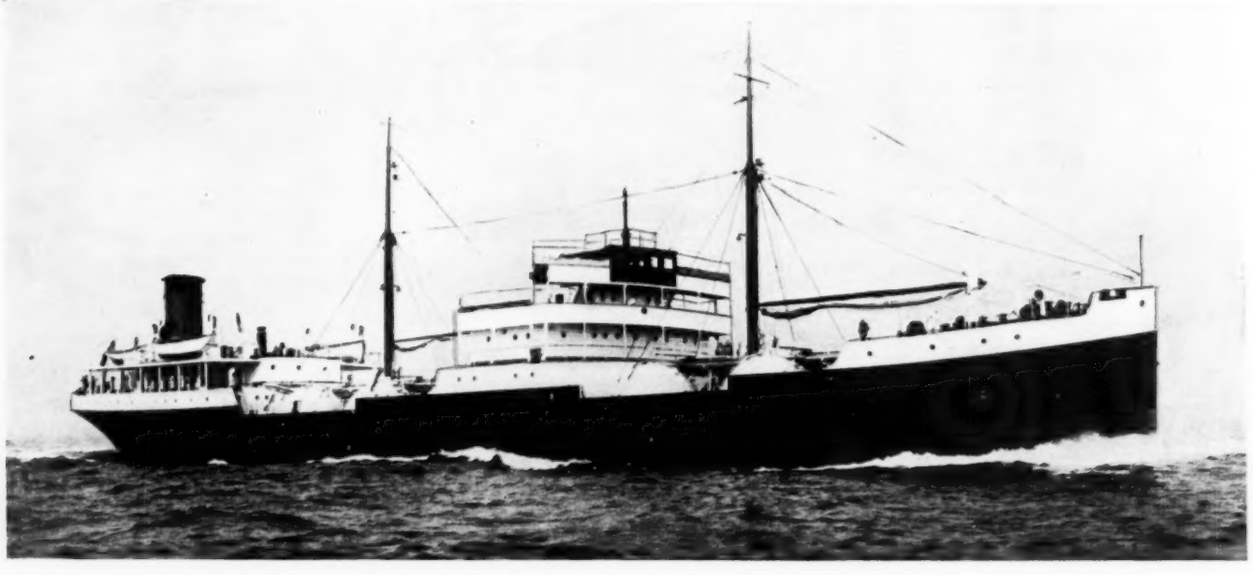
means of steam jets in order to vaporize any volatile oil, which may be present after which it must be left fully open to the atmosphere and efficiently ventilated; any deposit remaining on the interior surfaces must be removed by washing or scraping. The regulations also cover other precautions to be observed.

Load Line Convention

IN spite of the fact that large numbers of Norwegian tramp tankers are laid up, Norwegian shipowners seem to be keen on obtaining at the earliest possible moment the increase in capacity which the new Load Line Regulations permit. Pressure has been brought to bear on the Norwegian Government with the result that a Royal Decree has been issued, providing that if the shipowner so wishes the load lines for his tanker can be fixed according to the new International Load Line Convention. This convention has been ratified by Norway, and becomes effective July 1, 1932. Applications for the assessment of this new freeboard are at the moment only being dealt with in a limited manner. There are 58 tanker owners in the tanker group of the Norwegian Shipowners' Association. These owners have a fleet of

(*Continued on page* 508)

The tanker Agnita has been specially built to carry butane in domed, vertical, cylindrical tanks which can be seen in the illustration



FINANCE

London: July

IN common with most world markets, London oil shares have received most of their recent stimulus, both upward and downward, from European affairs. Possibilities of a world trade revival opened up by President Hoover's war debt postponement proposals brought about a big recovery in prices. But the advance received a sudden and almost unexpected check from the threatened financial collapse in Germany. Both the rise and reaction were largely due to pure speculation, the first to the closing of short positions, and the second to bulls getting out of the market, following the rise and the subsequent bad German news.

News of the oil industry in the United States has been another important factor, but on balance its influence on prices has not been large. Dealers are naturally discouraged by the fact that in areas such as East Texas, prices of crude have been reduced to an extent which really means giving it away. On the other hand, dealers are paying keen attention to the indications that determined efforts are being made to right the situation by legislative means. The feeling of many observers now is that, at any rate, the position cannot become much worse. Apart from outside influences, the tendency of the market would probably have been upward, by way of response to the relatively strong positions disclosed in the latest accounts of leading companies. As it is, share prices are well below the highest touched in recent weeks with a downward tendency, although they are generally higher than a month ago. In the case of several shares, allowance has to be made for dividend deductions.

STATEMENTS made at the annual meetings of leading concerns, no less than the sound finances disclosed in their accounts, have provided the market with bullish points. At the Shell Transport meeting, Lord Bearsted, the chairman, emphasized the fact that reserves of the Group have not been depleted in any way by payment of dividends, which were solely the result of operations. Lord Bearsted's view coincides with those expressed in the market that a correcting movement for overproduction, particularly in the United States, must be near. Meanwhile, the company through its subsidiaries is developing the distributing side of the industry, one direction in which valuable progress has been made being the introduction of oil fuel for specialized industries in replacement of coal. Shell shareholders did not receive much encouragement as to the immediate future, but were told that their company was among the best equipped in the world for weathering the present depression.

ATTOCKS came into the limelight again with a rapid rise from 5/8 to 27/32, despite the announcement of unsatisfactory results for the past year. The recently issued accounts showed a decline in production from 480,222 to 191,249 bbl., and as considerably lower prices were obtained in the latter part of the year in the Indian markets to which the company largely caters, net result was a loss of £29,789, against a profit of £167,006 for 1929. Even this result was only attained by halving the depreciation allowance. The fact that a loss was incurred and no dividend paid was no surprise to the market, for the company is now in a transitional stage, pending results from the deep drilling program instituted last year. The chairman at the meeting did not hold out any hope of immediate improvement in results, but subsequent demand for the company's shares, reported to come from the East, gave the market the idea that developments at depth are proving satisfactory. Most dealers, however, considered that the advance had gone far enough to discount immediate possibilitie, and the best price was not held.

SHAREHOLDERS of the Phoenix Oil and Transport Company were informed at the annual meeting that the company derived considerable temporary benefit last year from the local output restriction scheme in Roumania. This accounted for the profit of £248,459, which, although comparing with £275,557 in 1929, was in advance of the 1928 earnings. No final dividend was paid, the 2½ percent interim distribution remaining as the total dividend for the year. In conserving resources, the directors are evidently following the only reasonable course, for prices for oil products have come down heavily since the restriction scheme broke down last autumn owing to the withdrawal of one of the largest producers. Although Phoenix production, which last year reached a new high level, has since shown a further increase, being now limited only by the capacity of the refinering plant, immediate prospects are not bright. Sir Edward Manville, who presided at the meeting, nevertheless conformed to the view of other

London Stock Exchange Prices

1931 High	1931 Low	Last Year's Div. % per Ann.	Share	June 15 to July 15 First	High	Low	Last	Change
9/16	3/8	3½	Anglo-Ecuadorian	11/32	7/16	11/32	5/8	+ 1/32
2⅝	1⅛	17½	Anglo-Egyptian "B"	1⅛	1 17/32	1⅛	1⅞	+ 3/8
2 13/32	1 13/32	15	Anglo-Persian	1 31/32	2⅛	1 27/32	2⅛	+ 5/32
5/8	9/32	15	Apex Trinidad (5s.)	13/32	7/16	5/8	13/32	.....
31/32	½	....	Attock	5/8	27/32	5/8	5/8	+ 1/8
5/16	3/16	5*	Brit. Borneo (6s.)	9/32	9/32	7/32	¼	— 1/32
7/32	3/16	6¾	Brit. Burmah (8s.)	3/16	3/16†	3/16†	3/16†	.....
5/32	1/16	....	Brit. Controlled ($5)	1/16	3/32	1/16	1/16	.....
¼	1/16	....	Brit. Controlled Pfd. ($5)	3/32	5/32	3/32	3/16	+ 1/32
3⅝	2 1/16	22½	Burmah	2 13/32	2 19/32†	2⅝†	2 19/32†	+ 1/16
19/32	5/16	12c.	Canadian Eagle (No par)	11/32	13/32†	11/32†	11/32	.....
11/16	⅜	....	Creole (No par)	7/16	21/32	7/16	3/8	+ 1/16
5/32	1/16	....	Kern River (10s.)	1/16	5/32	1/16	3/16	+ 1/16
1⅜	23/32	10	Lobitos	1 3/32	1 7/32†	1 1/32†	1 3/32	.....
17/32	5/16	6	Mexican Eagle ($4 Mex.)	11/32	7/16	11/32	11/32	.....
36½	25	40c.	Pan American "B" ($50)	30½	30½	25†	25†	— 5½
⅜	5/16	2½	Phoenix	7/32	5/16	7/32	⅜	+ 1/32
26 5/16	15 7/16	17	Royal Dutch (fl. 100)	16¾	20 5/16	16½	17¾	+ ⅜
3 17/32	2⅜	17½*	Shell Transport	2 5/16	2⅞	2 5/32	2⅜	+ 5/16
9/32	3/32	4	Steaua Romana	3/32	9/32	5/32	⅜	+ 1/16
1 11/32	½	7½	Trinidad Leasehold	⅜	1 9/32	13/32	1 5/32	+ 5/16
9/32	5/32	....	Untd. Brit. of Trinidad (6s.8d.)	5/16	⅜	5/16	5/16	.....
1 25/32	1¼	17½	Venezuelan Oil Concessions	1 7/16	1 11/16	1 3/16	1 3/16	— 1/16

Nominal value of shares £1 unless otherwise stated by bracketed figures.
* Denotes Tax-free dividend. † Denotes "Ex-dividend" price.
c. Denotes cent per share.

oil chairmen that his company can carry on successfully until conditions improve.

As often happens, Tocuyo Oilfields of Venezuela has so far failed to fulfill the hopes entertained when the company was formed in the autumn of 1928. Drilling at El Mene and Menecito revealed complex underground conditions, conducive to a large proportion of unproductive wells. A test well has been abandoned, and deep drilling is now in progress. Total production amounted to 199,080 bbl., and was sold at prices current at the time of delivery. Income from this source, less depreciation and general expenditure, left a deficit on the year of £131,133. Expenditure on capital account was £293,945. The company had at the end of the year £211,235 deposited with the Central Mining and Investment Corporation, the principal controlling interest, and cash amounting to £215,920. Although 10 of its 27 wells are producing, it will apparently want more finance in a year or so unless production can be substantially increased or products sold at more remunerative prices.

Anglo Persian Oil Company has increased the strength of its German marketing operations by taking up the entire new issue, which increases the the capital of the Olex Duetsche Benzinund G.m.b.H. from 24,000,000 to 60,000,000 marks. Anglo Persian now controls 90 percent of the common stock of this petroleum distributing company.

Alec H. Day

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Paris: July

During the last days of June and in the beginning of July prices of oil shares on the Paris market showed a decided tendency to improve. In some cases 50 points and more were gained, despite the fact that the distributing companies are still waging war with one another and that there is no reason for any optimism. On the contrary the events of the last week in Germany might well have justified a panic here. Fortunately the Bourse was closed on Friday evening, July 10, on account of the celebrations of July 14, and only opened again on Wednesday, July 15. This prevented wholesale selling of stocks and shares, and although today there has been a sharp decline, the Paris Bourse has only come into line with Wall Street and the Stock Exchange.

Public opinion in France is very skeptical as to the sincerity of Germany's present position and most people are inclined to believe that if Germany is not aided by the Allies, she will still find some solution of her own to the problem, other than that of bankruptcy.

"Omnium International des Petroles" is a holding company controlling two important Roumanian companies—the S. A. Colombia and the S. A. Steaua Française. It also owns shares in the C. P. F. and has the same President as the latter,—Colonel Ernest Mercier. This year the Company's annual meeting proved a stormy affair. One of the shareholders, not entirely satisfied with the explanations that had been given him asked the President for information concerning the actual price set upon the S. A. Colombia's shares, which figured on the Omnium International de Pétrole's balance sheet as representing 70 percent of its capital—whereas the whole of the company's investments were represented by Fr. 80,230,173.07.

The shareholder admitted that he had paid a large price for the Colombia shares he held, and as they are now only quoted Fr. 70 on the Paris Bourse, he seemed justified in wanting to know whether they were quoted at par on the Omnium's balance sheet, at present rates obtainable, or at some other fictitious rate. He pointed out that 70 percent of Fr. 80,000,000 was equal to about Fr. 56,000,000, which is almost equivalent to the whole of Colombia's capital (par value).

Colonel Mercier, in spite of his interlocutor's insistance firmly refused to answer the question, and justified this refusal by saying that the S. A. Colombia's credit could only be harmed if the price were made known to the public. He said, that in his opinion the company's (Colombia) present position was an excellent one, that it owned all kinds of equipment, good producing wells, and is well administered by a competent staff, therefore the prices now obtainable for the shares on the Stock Exchange had nothing to do with the sum for which the Board had decided to value them at for the Omnium's balance sheet.

This in reality is perfectly correct; the S. A. Colombia has made great progress within the last few years. Prices now obtainable for crude oil in Roumania are lower than they have ever been, nevertheless Colombia has reported slight profits latterly, whereas a few years ago when prices were excellent there were none.

The Company's production amounted to 2,205,000 bbl. of crude oil in 1930 against 1,200,500 bbl. in 1929. Of the 1930 production 1,519,000 bbl. were refined by the S. A. Colombia itself against 1,225,000 bbl. the previous year. Again only 100,750 ft. of drilling work was done in 1930 against 112,125 ft. in 1929. Furthermore, Colombia is still adding to its refinery at Campina. This will enable it to increase its production of refined products still further by the end of the year. Finally it has reduced its overdraft with the Omnium International des Pétroles from Fr. 4,253,000 to Fr. 1,895,000. All this augures well for the future, nevertheless, the turbulent shareholder has our sympathy.

Omnium International des Pétroles will distribute no dividend this year; profits for 1930 amounting to only Fr. 1,489,133. Five per cent of this, i.e., Fr. 72,895 will be put aside for legal reserves, Fr. 1,350,000 against the fluc-

Paris Bourse Prices

1931			July 16 to July 10				
Div.	Par	Share	First	High	Low	Last	Change
30 Lei	500 Lei	Astra Romana	94	122	90	95	+1
....	500 Lei	Colombia	65	91	50	73	+8
50 Lei	500 Lei	Concordia	54	72	51	60.25	+6.25
....	500 Fr.	Cdré. Gén des Pétroles act.	....	....	....	....	....
....	500 Fr.	Cdré. Gén des Pétroles part.	....	1275	830	....	....
....	500 Fr.	Franco Pol. Pétroles act.	52.25	69	50	60	+7.75
....	....	Franco Pol. des Pétroles part	....	....	....	....	....
1 $	10 $	Franco Wyoming	211	314	211	302	+91
20 Fr.	500 Fr.	S.G.des Huiles de Pétrole act	287	340	287	315	+28
....	....	" " part	....	115	101	101	....
....	500 Fr.	C. Française des Pétroles	....	580	550	550	....
....	500 Fr.	C. Industrielle des Pétroles.	800	810	795	800	....
70 Fr.	500 Fr.	Lille Bonnières Colombes prio	760	810	710	775	+15
45 Fr.	500 Fr.	" " ord	505	529	475	520	+15
....	500 Fr.	Malopolska act	26	50	25	32.50	+6.50
....	....	Malopolska part	141	240	161	183	+42
....	....	Mexican Eagle	44	59	44	53	+9
....	250 Fr.	Omnium Inter. des Pétroles	101	123	95	101	....
50 Fr.	500 Fr.	Pechelbronn	600	696	600	650	+50
60 Fr. B.	500 Fr. B.	Petrofina	438	540	430	491	+53
240 Fl.	1000 Fl.	Royal Dutch	20490	25600	20425	22710	+2220
24 Fl.	100 Fl.	Royal Dutch 1/10	2070	2065	2530	2293	+223
....	1 £	Shell	295	368	294	334	+39
25 Fr.	500 Fr.	Steaua Française	160	195	158	195	+35

tuation of investments and the remainder, Fr. 66,938, will be carried forward.

WITH a capital of Fr. 144,375,000 the S. A. Franco-Polonaise des Pétroles reports a net profit of Fr. 385,940 for 1930. Total production amounted to 76,020 bbl. of crude oil and 3,000,000 cu. meters of natural gas. About 15,100 ft. of drilling work was done during the course of the year.

A dividend of any kind being an obvious impossibility, the shareholders of the Franco-Polonaise gave their consent to the sum of Fr. 385,940 being carried forward. This added to other sums which had already been carried forward makes a total of Fr. 6,012,513. The company has about Fr. 22,000,000 in reserve, debts amount to roughly Fr. 16,000,000. Fr. 6,328,000 are due for over taxation, and the Franco-Polonaise has advanced a sum of Fr. 20,000,000 to its different affiliates. Undoubtedly things are going from bad to worse in Poland, and are partly responsible for the company's present sad plight,—that at least is the Board of Directors opinion.

In Poland the Government has afforded protection to the oil industry and prices obtainable in the country itself, as a result of this protection, are good; but, unfortunately, Poland only consumes about 60 percent of the oil it produces, the rest is exported and has to compete with other oils for very low prices. The losses sustained abroad are, therefore, barely compensated by profits made at home.

COMPAGNIE DES PRODUITS CHIMIQUES ET RAFFINERIES DE BERRE, which increased its capital from Fr. 110,000,000 to Fr. 200,000,000 during the last financial year reports a loss of Fr. 16,358,521.40 for 1930, which added to that of the previous year, brings the total up to Fr. 25,568,078. These losses are partly explained by price wars which accounted for Fr. 2,302,254 during 1930 and also by the obligation each company has to stock ¼ of the gasoline it is permitted to import. In the Cie. de Berre'e case depreciation on stocked gasoline amounted to Fr. 4,159,957.

Berre still has liabilities amounting to Fr. 34,831,450 for refining equipment bought in Germany under the reparations scheme. It owes Fr. 27,283,607 to different purveyors and Fr. 92,005,824 to creditors. On the other hand the company estimates its refinery, land, etc., at Fr. 188,417,690, stocks at Fr. 9,713,044, patents and concessions at Fr. 9,116,667, and participations at Fr. 39,675,001.

The president of the company pointed out that the refinery is now quite complete, and stocks of crude oil are sufficient to start refining. Société Franco Egyptienne which is controlled by Berre will act as its distributing organization. The two companies together have importing licenses amounting to 1,343,000 bbl. of gasoline, 208,000 bbl. of refined mineral oils, 161,000 bbl. of heavy oils, and 266,000 bbl. of gas oil.

The company's present position is not entirely enviable and will have to be carefully handled by competent persons, if next year it is to show profits in the place of losses. The present administrator, Henry Bourdonneau, has sent in his resignation.

SOCIETE FRANCAISE DE RECHERCHES AU VENEZUELA has so far limited its activities to the drilling of some wells in Venezuela, one of which, Cacuz No. 3, was successfully brought in on September 9, 1930, with an initial production of about 42 bbl. a day. Oil has been stocked, however, and in accordance with proration measures production has been reduced to 10 bbl. a day. Nevertheless, plans are being elaborated which will enable the Société Française de Recherches au Venezuela to increase its field of action in the near future.

The company's balance sheet for 1930 was approved by the shareholders on June 30, in spite of the fact that it did not include a "Compte Profits et Pertes." (Profit and loss account.) During the course of the financial year it was found necessary to increase the company's capital from Fr. 30,000,000 to Fr. 40,000,000. Capitalizations for 1930 amounted to Fr. 35,329,184 as compared with Fr. 25,471,691 in 1929.

E. J. ANDRE

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New York: July

THE immediate impetus provided the stock market by President Hoover's debt moratorium proposal culminated about June 27, and has been followed by a gradual falling off until at the present writing approximately half of that gain has been eradicated. The volume of transactions has been comparatively light, reflecting the professional character of trading in this period, and the reluctance of this element to operate aggressively pending the outcome of the uncertain and precarious conditions in central Europe, and awaiting further definite guidance from developments in the domestic business situation.

Some slight signs are coming to hand from the oil industry that current extremely low prices are beginning to

New York Stock Prices

1931 High	1931 Low	Current Div. $ per Annum	Stock (Par Value $)	Sales (Shares)	June 22 to July 25 First	High	Low	Last	Net Change[1]
23⅝	11⅛	1.00	Atlantic Refining (25)	75,000	15⅜	17⅞	14⅛	15	— ⅛
14½	5¾	1.00	Barnsdall "A" (25)	76,700	7⅝	9⅝	7⅝	8⅝	+1
3¼	⅝	....	Colon Oil (No)	18,500	1¼	2⅛	1¼	1⅛	+ ⅛
12	5	....	Continental Oil (No)	174,900	7⅜	9¾	7⅜	8⅜	+ ⅜
3⅞	2	....	Creole Petroleum (No)	13,900	2¼	3⅜	2⅛	2⅝	+ ⅛
75½	38	1.50	Gulf Oil Corp. (25)	30,300	52⅞	64	50½	54	+1⅝
72	49⅞	2.00	Humble Oil & Ref. (25)	11,200	56	69½	55	62	+5½
18¼	9⅝	0.50	Imperial Oil, Ltd. (No)	23,500	12¼	14	11⅜	11⅞	.....
4⅝	2	....	Indian Refining (10)	3,800	2½	3	2½	2½	.....
15½	8¾	1.00	International Petr. (No)	55,300	10⅝	12¼	10½	12	+1⅝
20¾	10⅝	....	Mexican Seaboard (No)	189,200	15½	17	13½	14¼	— ⅛
19½	7	....	Ohio Oil (No)	114,400	9	11⅝	8⅞	9⅞	+1
36½	24	*0.40	Pan Amer. P. & T."B"(50)	100	28½	28½	28½	28½	.....
16⅝	4¾	....	Phillips Petr. (No)	102,000	6⅞	9⅜	6⅞	8¼	+1½
20⅝	6½	....	Prairie Oil & Gas (25)	15,500	9¾	10⅞	9	10¼	+1¼
11⅞	5½	....	Pure Oil (25)	46,400	6½	8⅞	6½	7⅝	+1⅜
6⅜	1	....	Richfield Oil (No)	15,600	1½	2	1¼	1⅜	.....
42⅝	24⅞	‡2.27	Royal Dutch N. Y. (13⅓)	37,600	29¼	33⅜	26½	27	— ⅛
10¼	4½	....	Shell Union (No)	104,700	6¼	8	6	6½	+ ⅛
15⅞	6¼	....	Sinclair Consol. (No)	391,300	8½	11⅝	8½	10¼	+1⅛
12⅞	3½	....	Skelly Oil (25)	6,600	4¼	6	4¼	5¼	+1½
51⅜	31½	‡2.50	Standard Oil of Calif. (No)	160,500	36½	39¾	35¼	36¾	.....
38½	19¼	2.00	Standard Oil, Ind. (25)	175,800	25⅞	28½	24½	24¾	— ⅞
23⅝	15⅝	1.60	Standard Oil, Ky. (10)	15,700	18	19⅞	17⅞	18¾	+ ⅜
52½	30⅝	§2.00	Standard Oil, N. J. (25)	454,600	37¾	41¾	35¼	36⅞	— ⅛
26	13⅞	1.60	Standard Oil of N. Y. (25)	411,700	16½	18⅞	16	17½	+1½
45¼	31	#1.00	Sun Oil (No)	1,500	33½	42	33½	42	+10½
36¼	18	2.00	Texas Corp. (25)	153,300	20⅞	24⅞	20¼	23	+2½
9	4	....	Tide Water Assoc. (No)	47,600	6	6¾	4⅞	5½	— ½
26⅝	14	*2.00	Union Oil of Calif. (25)	46,900	18¾	19⅞	16¼	16¾	—1¾
69¾	22½	2.00	Vacuum Oil (25)	130,900	39	47	38	43¼	+4¼
1⅞	⅝	....	Venezuelan Petr. (5)	10,500	¾	⅞	¾	¾	.....

[1]Since close of last month's table. * Initial dividend, paid July 20, 1931. † Paid for 1930—no regular rate. ‡ Also paid 2 percent in stock at close of 1930. § Including extras. # Also paid 9 percent in stock at close of 1930. ★ Plus 4 percent in stock.

accomplish a correction of the economic maladjustment within the industry, which has been steadily growing worse in recent years despite cooperative efforts to control through proration of output. Up to the present time the industry has found that the only effective means for discouraging new drilling is low prices. It should be remembered, however, that no improvement is likely to be effective in the near future sufficient to enable the industry to reap financial benefits from the present season of heavy consumption. On the other hand very great economies of operation have been effected by major companies.

STOCKHOLDERS of both the Standard Oil Company of New York and the Vacuum Oil Company met on July 30, and ratified the plan for consolidating the two organizations. Besides approving the merger plan the stockholders of the Standard Oil Company of New York adopted a resolution authorizing an increase in the capital to 40,000,000 shares of $25 par value each and changing the name of the company to Socony-Vacuum Corporation. The company will issue 14,067,250 new shares in exchange for the stock of the Vacuum Company in the ratio of 2½ new shares for each Vacuum share. It also will issue 17,849,436 shares in exchange for stock of old Standard Oil of New York in the ratio of one share of new stock for each of the old. An additional block of 6,386 shares will be utilized for conversion of White Eagle Oil Corporation stock and subscription rights. Altogether the Socony-Vacuum Corporation will issue forthwith 31,923,072 shares.

FOLLOWING first quarter net loss of $2,162,800, after charges and inventory adjustments, Atlantic Refining reported deficit of $1,850,200 for the second quarter, bringing half year loss to $4,013,000 in comparison with net profit of $2,818,823 in the first half of 1930. Dividends are still being paid at the $1 annual rate, being made possible by the very strong financial position reported at the close of last year.

IMPERIAL OIL, LTD., of Canada is undertaking a construction program at its refinery at Sarnia, Ontario, involving expenditure of $1,000,000. The installation will be known as a "debutanization plant" and will be for the purpose of improving the quality of gasoline manufactured—particularly winter gasoline. It is stated that the work will probably be completed by the first of next year. Further details are not available.

SUN OIL COMPANY reported consolidated net income for the six months ended June 30 of $1,049,403, equal after preferred dividends to 49 cents a share on 1,535,403 no par shares, compared with net of $3,658,157, or $2.42 per share of common, in the first half of 1930. Regular cash dividends at the annual rate of $1 a share have been continued to date and 9 percent stock dividend was paid at the close of last year. Balance sheet as of May 31, 1931, showed satisfactory financial condition, cash and equivalent being equal to about $1,650,000, or slightly more than $1 a share.

REPORT of Union Oil Company of California for the second quarter reveals a sharp drop in net from the 41 cents a share earned in the first quarter. Net after charges was only $100,000, equal to about 2 cents a share on 4,386,070 shares of no par capital stock outstanding. The 43 cents a share shown for the first half year was less than half the $1 dividend requirements of that period, and cash payments at the regular $2 rate are being continued in large part from surplus. For the first half of 1930 earnings were equal to $1.20 a share on a slightly smaller number than are now outstanding. As of June 30 company was in very strong financial position with cash resources of about $18,000,000 equal to three and one-half times total current liabilities. Total current assets were more than ten times current liabilities. For the 18,500,000 bbl. of oil products marketed in the first half of this year $33,000,000 in gross revenues was received, equivalent to $1.78 a bbl.; whereas in the first half of 1930 19,200,000 bbl. of products yielded $44,500,000 in gross, or $2.33 a bbl. The price situation on the West Coast where Union finds its principal markets is now somewhat improved from recent extremely low levels, but is still considerably worse than at the close of last year.

ALTHOUGH second quarter statement of Standard Oil of California is not available as we go to press, it has been reported that little or no profit for that period is expected to be shown. For the first quarter of this year 33 cents a share was reported compared with 73 cents the previous year, and the second quarter of last year yielded 80 cents a share. Dividends at the regular $2.50 annual rate are being continued for the present from surplus.

IT has been officially stated that sales of McColl-Frontenac have been well maintained to date and business continues on a satisfactory basis. The company is a refiner and distributor, and has been able to take advantage of depressed crude oil prices in purchasing its raw material. Earlier this year its East Montreal refinery operated for 64 days without a stop, which was claimed to be a world record. Despite higher gross revenues in the fiscal year ended January 31, net was lower than the previous year due to increased bond interest and greater depreciation and other charges, being equivalent to $1.43 per share of common against $1.92 the previous year.

MEXICAN EAGLE OIL COMPANY, LTD., and Canadian Eagle Oil Company, Ltd. (both controlled by Royal Dutch-Shell), have declared the same dividends for 1930 on their ordinary and participating shares as were paid for 1929. In the case of the former these amount to 11.94 cents and 15.92 cents, respectively, and the case of the latter 12 cents and 23.88 cents, respectively (U. S. currency).

DUE to western Canadian conditions operating against the company, North Star Oil is not likely to show a large margin over its preferred dividend requirements this year. Earnings have been plowed back into operations and no dividends have ever been paid on the common; but, in the past the company has shown good earning power and seven percent has been paid on the preferred since 1920. Last year $1.28 per share was earned on the common; $1.75 in 1929 and $1.87 in 1928. Poor agricultural conditions in the West have caused the volume of business to drop.

C. C. BAILEY

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CREOLE PETROLEUM CORPORATION has abandoned its Punta de Leiva camp in the Maracaibo Lake basin area, and its entire personnel has been transfered to Maturin, Eastern Venezuela. Charles Osterhoudt, company auditor for the Creole, headed a party of twenty-five employees aboard the S. S. LIBERATADOR for Curaçao to connect with the SS. COLOMBIA to Trinidad, enroute to Maturin.

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Endeavors to recharge the depleted gas sands in the Bow Island, Alberta, natural gas field are now being made, using some of the surplus gas from the Turner Valley. There are 29 gas wells in the field and of recent years the sand has become considerably depleted.

U. S. Production Review

	Daily Production bbl.	Daily Runs to Stills bbl.	Gasoline Stocks bbl.	IMPORTS Total bbl.	IMPORTS Gasoline bbl.
Week Ending June 20	2,476,271 371,362*	2,434,100	41,982,000	1,111,000	61,000**
Week Ending June 27	2,445,471 359,704*	2,416,900	41,868,000	1,083,000	40,000**
Week Ending July 4	2,483,425 351,972*	2,324,700	39,698,000	1,910,000	473,000
Week Ending July 11	2,538,980 381,539*	2,404,000	38,342,000	1,406,000	175,000
Week Ending July 18	2,446,800 408,000*	2,430,693	37,377,000	1,642,000	294,000

Underlined figures indicate improvement in statistical position—decrease in production, runs to stills, gasoline stocks or imports.
(*) Production of the Rusk-Gregg field, East Texas.
(**) Unusually small imports of gasoline for the two weeks ending June 27th must be noted.

Crude Oil Prices

EVER mounting production in the Rusk-Gregg field of East Texas, which reached 381,539 bbl. per day, or 15 per cent of the national output, caused a complete chaos in the crude oil markets of the Mid-Continent area. Postings by most of the major companies reached their low levels after cuts initiated by the Humble Oil and Refining Company (S. O. N. J.) on July 8 in the Texas fields and by the Sinclair Oil Company in the Oklahoma fields.

In East Texas posted prices gradually declined to 10 cents per bbl., while most of the major companies withdrew their schedules from Rusk-Gregg field entirely. As low as 2½ cents per bbl. has been quoted in the case of several transactions, while 5 cents per bbl. is a common price. The average price for the week ending July 8 was 16.2 cents per bbl., but it was very definitely slipping towards the 10 cent mark.

Even a perfunctory study of the new prices indicates that there can be no profit now in the producing branch of the industry, even in the flush areas, and that in the great majority of fields even bare producing costs are not covered. Such situation resulted in a most serious and most commendable development in the producing branch of the oil industry —a strike of producers.

This strike was principally responsible for a definite reversal of the crude oil price trend, which occured just at the time of going to press. The shortage of crude in Oklahoma and Kansas resulted in increased production from the Rusk-Gregg field, which exceeded 500,000 bbl. per day, and also in slightly firmer quotations in that field, the current average being estimated at 21 cents per bbl. This increase was largely due to the over-building of pipe line facilities in East Texas, some of the lines being faced with complete lack of reliable crude oil contracts. Since the pipe line construction continues unabated, further stiffenning of prices is inevitable, and as soon as the field will begin stabilizing its production as a result of either natural decline or proration a fight for crude oil connections will result in considerably higher prices.

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IN Oklahoma, Kansas and North Texas areas the increase in price of crude oil was initiated by the Continental Oil Company, which posted 40 cents flat on July 22. Carter Oil Company (SONJ) followed on July 25 posting a graduated schedule with 42 cents top for 40 gravity and above. This schedule, with minor variations, was met by all purchasers, with the exception of the Sinclair Oil and Gas Company, which posted 50 cents flat on July 27, this price being the current top. The southwest Texas — New Mexico crude oil was restored to the former 25 cent price per barrel. Corresponding increases were being made throughout the fields of United States east of California.

Shut-Down vs. Proration

THE Texas legislature was convened on July 14 to pass laws curbing the production of the Rusk-Gregg field and thus prevent further losses to the people of the State caused by the low crude oil prices. Two schools of thought clashed at the opening, one in favor of empowering the special commission with the right to fix market requirements from individual fields, the other maintaining that such power would be price fixing and expressing themselves in favor of empowering such commission to conserve the State's natural resources, arguing that such powers would be sufficient to reduce production to the market demands. At the first session a resolution to provide for an investigation of the oil industry by a joint committee of the house and senate was defeated.

Meanwhile production in East Texas continued to soar upwards, since reaching the 500,000 bbl. mark, and the prices throughout the Mid Continent continued to establish lower and lower records. In California where matters appeared settled, the situation has also given indications of getting out of hand, the production gradually increasing instead of decreasing. It became more and more apparent that only voluntary proration sponsored by the operators could be successful.

After the last cuts, the operators, faced by huge direct producing losses, decided not to wait for the help of the numerous proration committees, but to stop production entirely—in other words to initiate a producers' strike. The movement originating in the Oklahoma City field spread to Kansas, Texas and New Mexico with remarkable rapidity. In Oklahoma City production was reduced from 250,000 bbl. to 150,000 bbl., per day, and a reduction to 50,000 bbl. per day is anticipated, practically all companies but two being in favor of shut-down until the price is restored to $1.00 per bbl. In Kansas 300 operators agreed to shut-in 22,000 wells with a daily current production of about 40,000 bbl. Complete shut down is planned for Southern Oklahoma fields where a 7 cent price has been posted. In Texas the Continental Oil Company shut-in its McCamey field properties, the Pure Oil Company ordered shut-down of its Howard and Upton properties, while a complete shut-down is planned in New Mexico and in Yates pool of Texas, where the new schedule is 10 cents per bbl. In North Texas the shut-down will be almost complete because of high production cost. Also many producers discontinued their pipe-line connections.

This spontaneous action, not approved by any legislation, and not sponsored by any of the numerous commissions, promises to have far-reaching results. Already the major pipe lines are obliged to look for oil, and will probably be forced to increase prices to get it. In Oklahoma City pipe line runs lately exceeded 200,000 bbl. per day, and at this time the curtailed production cannot meet this demand. The producers' strike will never be complete. There are producers who refine their crude and to whom low prices are advantageous. At this time, for example, neither Sinclair nor Champlin interests are expected to shut-in their Oklahoma City properties, and in such case their offsets will necessarily produce also. However, producers will learn, that a shut-down of from 50 to 75 percent may be fully as effective in forcing reasonable prices to be paid, and that the few barrels lost by drainage are more than compensated by stabilized prices.

A new and highly important factor thus enters the oil industry—a producers' strike. A weapon which was handed down to minor operators by the major companies themselves by the unwarranted reductions in the Mid-Continent fields, purposefuly perhaps. If this unorganized cooperation between producers will continue a fair price of $1.00 per bbl. may be established and maintained in the Mid-Continent.

East Texas—Rusk-Gregg

ACCORDING to latest data available the Rusk-Gregg field had on July 15, 1,250 producing wells and 150 active operations. On that date, total recovery of crude oil reached 25,000,000 bbl. There has been no indication of slowing up of operations; rather a change from smaller operators to the major, as the offset requirements have to be fulfilled. Salt water encroachment continued to endanger the field, an estimated total of 50 wells showing brine. In the South Joiner Sector 130 wells, of total of 415, stopped flowing, some of these having initial production of 15,000 bbl. per day, indicating an amazing loss of pressure, considering the small production per well and per acre to-date.

An additional difficulty in the Rusk-Gregg field is the ease with which wild flowing wells catch fire with attendant huge losses of crude oil, accelerated water encroachment, and property damages. In the last four months five gushers caught fire, two of them burning at this time. The Bell and Grady No. 1 Daniels has been on fire since June 24, and P. Vitek No. 2 since July 13, both wells estimated at better than 15,000 bbl. per day. The reason for the fires is the apparently dangerous low pressure light fraction saturation of natural gas, necessitating, but a finest spark for an explosion. In Oklahoma City field conditions, fortunately, were not favorable for quick ignition, the gas being under much higher pressure and carrying heavier fractions.

Texas—Yates Pool

THE short time gage potential of the Yates pool for the first time declined below 5,000,000 bbl. per day, being 4,855,000 bbl. from 401 wells, of which 81 are now making water. This potential is the second highest in the United States, after Oklahoma City. The field, of course, could not produce anything like this potential even for the first full 24 hours, and its reasonable potential, considering the danger of salt water encroachment, is not over 250,000 bbl. per day.

California—Kettleman Hills

NEW completions in this field increased the production from 58,000 bbl. for the week ending June 20, to the peak of 88,328 bbl. on July 3. Potential of the field is now estimated at 170,000 bbl. from 17 wells, or 10,000 bbl. per well per day. Operators in the field agreed to keep production down to 60,000 bbl. per day until January 1, 1932, provided that curtailment in other fields in California continues and is effective.

BASIL B. ZAVOICO.

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World Oil Production Figures—Official

All figures furnished direct to World Petroleum by Governments, except where otherwise specified

(Conversion 7 bbl. = 1 ton)

	Total 1930 (revised) (barrels)	JANUARY (barrels)	FEBRUARY (barrels)	MARCH (barrels)	APRIL (barrels)	MAY (barrels)	JUNE (barrels)	Total 6 months (barrels)
United States	896,265,000	65,991,000	60,645,000	69,375,000	73,101,000	77,164,000	75,116,000	421,414,000
Venezuela	141,652,832	10,579,707	9,806,034	10,705,814	9,597,784	9,834,545	9,519,825	60,043,709
Russia & Sakhalin	129,955,417	12,072,900	11,141,900	12,654,600	12,318,600	12,796,000	12,989,900	73,973,900
Persia	43,549,323[4]	3,201,156[6]	3,079,132[4]	3,081,260[6]	3,442,341[6]	4,296,642[4]	4,558,950[6]	21,659,481[6]
Roumania	39,876,589	4,233,810	3,570,000	3,856,020	3,850,000	4,195,100	3,990,000	23,694,930
Mexico	39,529,639	2,890,903	2,563,986	2,819,430[2]	2,761,039	3,080,603[2]	2,960,495	17,076,456
Dutch East Indies	38,722,250	3,226,854	3,225,000	3,200,000[5]	3,000,000[5]	3,000,000[5]	3,000,000[5]	18,651,854[5]
Colombia	20,343,176	1,657,694	1,565,425	1,774,865	1,467,429	1,479,452	1,435,185	9,380,050
Peru	12,445,888	986,902	662,022	1,131,155	914,342	762,624	512,900	4,969,945
Trinidad	9,419,804	831,522	744,518	844,534	798,134	788,528	817,761	4,814,998
Argentina	9,001,671	898,007	796,578	875,400	833,700	1,038,780	1,063,500	5,505,965
India (British)	6,936,315	662,604	635,743	705,568	575,000[5]	575,000[6]	575,000[6]	3,726,915[5]
Sarawak	5,251,541	326,956[1]	231,090	314,937[3]	309,876	302,295	293,151	1,778,305
Poland	4,645,550	390,600	350,700	381,500	357,000	372,155	357,500	2,209,455
Japan & Taiwan	2,250,000[5]	197,500[5]	195,000[5]	195,000[5]	195,000[5]	195,000[5]	195,000[5]	1,172,500[5]
Egypt	1,977,660	196,021[1]	158,210	162,225	160,573	152,418	149,646	979,093
Ecuador	1,596,238	137,531	120,145	126,544	117,763	169,111	164,467	835,561
Canada	1,535,827	179,711	155,651	160,358	153,705	156,392	155,000[5]	960,817
Germany	1,209,185	127,894	98,000	100,030	77,833	95,438	96,999	596,194
Iraq	980,000[5]	100,000[5]	100,000[5]	100,000[5]	100,000[5]	100,000[5]	100,000[5]	600,000[5]
France	516,642	40,075[2]	40,075[2]	40,075[5]	40,000[5]	40,000[5]	40,000[5]	240,225[5]
Czecho-Slovakia and others	220,000[5]	25,900[5]	25,900[5]	25,900[5]	29,000[5]	29,000[5]	29,000[5]	164,700[5]
Total	1,407,880,547	108,945,248	99,910,109	112,650,215	114,200,119	120,623,083	118,120,279	674,449,053

[1] 4 weeks to February 6th. [2] Official total, 1st quarter 120,225. [3] 4 weeks to April 17th. [5] Estimates. [6] Anglo-Persian Company's figures. [4] Actual production in Iraq probably higher than official total.

U. S. Soviet Russia Production Review

Official Soviet Figures for Petroleum Operations During the First Half of 1931

	Crude Production (bbl.)	Runs to Stills (bbl.)	Drilling (feet)
January	12,072,900	10,399,200	168,458
February	11,141,900	9,514,400	147,935
March	12,654,600	11,197,200	226,439
April	12,318,600	10,569,300	239,699
May	12,796,000	11,841,900	236,009
June	12,989,900	11,427,500	227,307
Total	73,973,900	64,949,500	1,018,540

First Half: 1931

ACTUAL figures for the first half of 1931 are far behind the 1931 schedule, which in accordance with the most recent revisions, called for the production of 191,280,000 bbl. of crude and gas, and 169,495,000 bbl. run to stills, with total drilling set at 3,378,300 ft.. It seems very unlikely that the quota for the year will be reached, unless production and runs to stills improve radically during the second half of the year. Judging by average monthly production during the first half, total crude production may amount to approximately 150,000,000 bbl. for the year. This would bring Russia into second place after the United States, as no material increase is anticipated in Venezuela, on the contrary, a reduction will be shown.

At several conferences held by representatives of the U. S. S. R. oil industry the problem of drilling was discussed and it was decided to introduce improved methods for increasing speed of drilling per rig per month. It was stated that in order to make the crude production quotas possible it will be necessary to increase the drilling distance to 16,500,000 ft. during the years 1931-1933, which are the last years of the Five-Year Plan. This figure represents a threefold increase over drilling done during the past three years. In view of the fact that drilling conditions have changed very little in Soviet Russia it is likely that difficultes will be encountered in meeting the quota.

Following table shows drilling speed per rig, per month during 1929-1930 compared with speed set for 1931:

Drilling Comparison Table

	1929 (ft.)	1930 (ft.)	Increase (%)	1931 (ft.)	Increase (%)
Production drilling	316.8	378.5	19.5	559.0	48.0
Production-exploring	243.8	258.0	7.5	438.5	95.0
Exploration	213.1	249.5	17.0	352.0	41.0
Average*	289.4	320.7	11.0	485.4	66.0

*Based on total number of rigs.

The average increase of 66 percent planned for 1931 will be insufficient during the years 1931 and 1933, as the quotas of crude production set for these years are enormous. Radical changes, therefore, have been ordered in drilling methods, equipment used, and personnel employed. Russia is attempting to attain the drilling speed of California which, in 1929, amounted to 1,000 ft. per rig, per month, but the drilling speed of Russia at present actually amounts to only about 36 percent of this figure; Soyusneft, nevertheless plans to reach the California standard not later than 1933.

Exports

EXPORTS of refined products from Russian sea ports during April, 1931 amounted to 3,063,525 bbl., compared with exports of 2,921,355 bbl. for April, 1930. Exports in May dropped over half-a million bbl.

May Exports by Products

(U. S. Department Figures)

Product	Barrels
Gasoline	815,414
Fuel oil	1,091,791
Kerosene	488,596
Lubricating oil	175,385
Total	2,571,186

Revised figures of the distribution of exports from Russia by product, during the fiscal year ended September 30, 1930, are now available, and show an increase of about 2,000,000 bbl. over the earlier official figures.

Revised Official Petroleum Export Figures

Products	1929/30 (Barrels)	1928/29 (Barrels)
Gasoline and Ligroin	11,026,500	8,246,250
Kerosene	5,829,750	5,863,500
Gasoil	3,175,500	2,034,000
Solar oil	530,250	495,250
Lubricating oil	1,504,500	1,465,250
Mazout	12,171,750	9,228,000
Crude oil	1,455,750	1,287,750
Sakhalin crude	311,250	146,250
Asphalt	18,000	.....
Total	36,023,250	28,730,250

Russian Petroleum Exports by Countries of Destination During the Special Quarter, October-December, 1930 and First Quarter of 1931

Destination	Oct. 1-Dec. 31, 1930 (Barrels)	Jan. 1-Mar. 31, 1931 (Barrels)
England	1,732,590	1,532,160
Italy	1,410,870	1,382,663
France	1,471,247	851,445
Germany	831,832	778,110
Spain	602,812	541,418
India	432,540	261,847
Turkey	365,558	328,680
Denmark	247,342	97,825
Belgium	217,538	161,347
South Africa	206,722	100,085
Austria Hungary	179,183	65,235
Greece	164,500	139,350
*Egypt	149,470	389,467†
Persia	139,942	115,260
Latavia-Lithuania	133,240	143,078
Sweden	124,133	54,382
Czechoslovakia	65,490	211,155
Esthonia	38,873	30,007
Arabia	37,163	.....
Manchuria	29,760	.....
South Africa	16,898	19,087
Finland	15,953	25,085
Yugoslavia	3,526	.....
Netherlands	.....	15,578
Bulgaria	.....	28,282
Bunkers	318,073	259,408
Total	8,935,255	7,530,954

* Bunkers to Port Said.
† Other authentic sources show only 234,100 barrels.

Consumption: First Quarter

DOMESTIC consumption of petroleum products in Soviet Russia during the first quarter of 1931 amounted to 16,629,775 bbl. distributed as follows:

Product	Barrels
Diesel oil	1,703,950
Fuel oil	9,870,800
Kerosene for illuminating	2,493,870
Kerosene for tractors	750,000
Gasoline	462,765
All other products	1,348,390

The foregoing figure is 85 percent of the plan, but represents an increase of 6.3 percent over consumption during the corresponding period last year.

Failure to bring consumption up to the figure set by the plan was largely due to shortcomings of transportation, which was 31.8 percent behind the point set by the plan in February and 19.4 percent behind in March. The number of tankcars delivered for loading petrole-

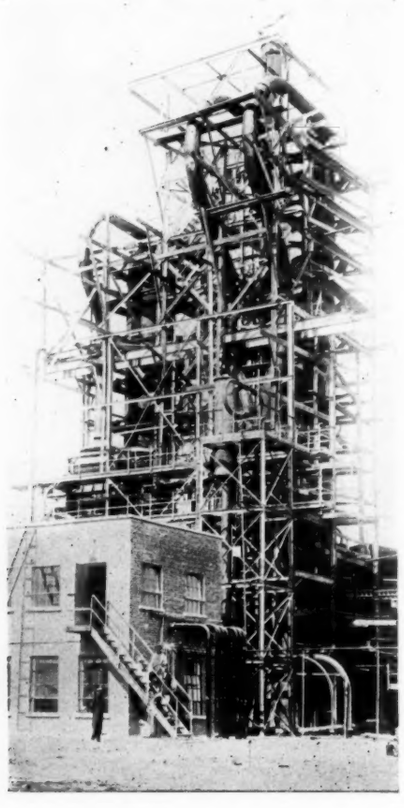
um amounted to 249,455 against 319,499 required. Kerosene loadings fell short of the plan by 41.6 percent. Transport arrears caused shortages in the delivery of petroleum products to consumers and complicated to a great extent problems of storing products at the oil trusts. At Grozni it was necessary to store fuel oil in plain trenches dug especially for that purpose.

Pipe Line Construction

ORDERS have been given by the Soyusneft to speed up construction work on the Caspian Sea-Ukraine pipe line. The first link of this line, namely, Grozni-Armavir and Touapse-Armavir, are to consist of 10 in., all welded pipe as mentioned in WORLD PETROLEUM for July. The Armavir-Nikitovka line will start at Kropotkino, a point on the existing Grozni-Touapse line about 30 kilometers from Armavir, and will run to Rostov and Nikitovka with a link line to Millerovo.

Several divisions were formed for the construction work, supply of building and construction materials, laying of the line, and building pump stations.

This unit fractionates 4400 bbl. daily of Grozni crude. It is at Grozni, U. S. S. R.



Cracking Plants

THE Russian press of July 1, is taking pride in quoting a wire from Baku to Moscow to the effect that the first Winkler-Koch cracking unit was put under steam by Russian engineers without the assistance of foreign specialists, and yielded a gasoline of very high quality. Winkler Koch is the American concern which, it will be recalled, has been awarded an order to construct six cracking units in Russia.

Equipment Plants

DOMESTIC plants manufacturing drilling equipment are not yet in a position to meet the needs of the petroleum industry; in fact, the present capacity of these plants is only 47 percent of the total requirements. The percent of orders executed during the past year by leading plants assigned to make drilling equipment is as follows:

Drilling Equipment Manufacturing

Plant	Percent of orders executed
Parvagdisa (Sormovo works)	71
Vomt (Shimdt works)	53
Dzerzinski Works	64
Krasni Molot Works	36

The Brianski Works of the Parvagdisa group, building mud pumps, have not been able to fill any of the orders that were on hand at the begining of the year. A survey of the position of the supply of drilling equipment, undertaken in April, 1931, shows that of the estimated 40,000,000 rbl. worth of equipment required for 1931 only about 30,000,000 rbl. worth was placed in orders; the greater part of the unplaced orders are for rotary drilling equipment.

There has been announced recently, however, the reorganization of the Podolsk Engineering Works for the purpose of building cracking and other refinery equipment. The Podolsk Works are located at a distance of about 40 kilometers from Moscow. The reorganization of the plant with a view to making it eventually the largest of its kind in the world, began early in 1931. Since then two gas separators and one evaporating tower have been turned out, and inspection of this work showed it to be of good quality.

Work on this plant is being rushed, as it plans to produce during 1931, twelve cracking units and six pipe stills, and during 1932, 60 cracking units and 25 pipe stills. In endeavoring to accomplish this difficult task the plant now employs 2,600 men, as against 800 at the beginning of the year. J. WEGRIN.

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ROUMANIAN OIL RESUMÉ

Finances

BUCAREST

THE distressed financial condition of the Roumanian oil industry will not become clearly evident until publication of the balance sheets for 1931. By comparison they undoubtably will make the balance sheets for 1930 look brilliant.

The accompanying table is a summary of results shown by a few of the leading Roumanian oil companies for 1930:

Although production in the Roumanian fields has been maintained at about 133,000 bbl. per day, the market for crude has become duller every day. The highest grade crude commands only about

Financial Results of Leading Roumanian Oil Companies

Company	Capital (Lei.)	Reserve Fund (Lei.)	Amortizations for 1930 (Lei.)	Net Profit (Lei.)
Astra-Romana	2,034,000,000	839,000,000	452,000,000	484,000,000
Romano-Americana	1,250,000,000	277,000,000	303,000,000	37,000,000
Steaua-Romana	1,000,000,000	1,163,000,000	703,000,000	40,000,000
Concordia	650,000,000	76,000,000	227,000,000	122,000,000
Creditul Minier	605,000,000	212,000,000	143,000,000	45,000,000
Columbia	380,000,000	251,000,000	113,000,000	14,000,000
I. R. D. P.	600,000,000	22,000,000	110,000,000	2,000,000

Lei 4,000 per car ($24 per 70 bbl.). On one hand export prices are continually falling, and one the other, the domestic market is being completely distroyed. Several small refineries have had to close down; but, the fact is overlooked by those who try to force them out of the field that with the return of prosperity all these small refiners will be back in the field unless the independent producers forming their source of supply are also eliminated.

Many small companies believe that the larger companies in their endeavors to emerge from the choas in a sound position, are striking both at the small refiners and the independent producers of crude, in order to leave nothing to chance.

New Petroleum Law

To alleviate Roumanian oil producers in their present dire straits, the Government may levy a special consumers tax and distribute the proceeds among producers and refiners. The bill is sponsored by Mihil Manoilescu, Minister of Industry and Commerce, and will prob ably become law in the near future.

In the first place, the bill establishes new taxes on petroleum products consumed in Roumania, amounting to Lei 3 per kgr. for gasoline, and lubricating oil; Lei 1 per kgr. for kerosene, and Lei 0.30 per kgr. for fuel oil. It is estimated that these taxes will produce a revenue of about Lei 671,000,000 per annum; of this amount, seven percent will be alloted to a fund for improving distributing stations for oil products in the country side. The State will receive a royalty of Lei 1,600 per car from the fund, and this revenue, amounting to approximately Lei 100,000,000 will go to the State railways in compensation for the new taxes on fuel oil payable by them. The remaining fund of about Lei 524,000,000 will be devoted to Roumanian producers.

Producing oil companies will be divided into three groups; (a) those producing up to 700 bbl. per day (b) those producing from 700 bbl. to 7,000 bbl. per day, and (c) those producing from 7,000 bl. to 17,500 bbl. per day. Bonuses will be distributed to these three groups in the proportion of two parts to (a), to one part to (b), to one half part to (c).

Amendment

Directly after the introduction of this bill the Committee of the Chamber of Deputies introduced the following amendments:

1. Tax on kerosene reduced from Lei 1 to Lei 0.50 per kgr.

2. Limit of production to which State aid shall be extended is reduced from 17,500 bbl. to 10,500 bbl. per day.

3. The proportion of aid extended to small producers of the first group (a) (production up to 700 bbl. per day) has been raised from two parts to three parts. This clause will increase the share which they receive from about Lei 27 per bbl. on the first 700 bbl. to Lei 36 per bbl.

All these amendments tend to assist the small producers, the Minister having realized that these, and not the big companies, were really in need of assistance.

The bill in its original form is very unpopular with consumers who naturally resent additional burdens at this moment of crisis, and feel that if the petroleum producer is to receive assistance from the State that the taxes on petroleum products—which are already excessive —should be reduced instead of increased.

Not only the consumer, but some classes of oil industrialists object to the new bill. Small producers, whom the law is designed to assist, objected to it (at least in its original form) because the assistance was not enough to carry them through this period of low prices and because they felt that the larger producers would receive more than 50 percent of the money to be distributed although they were not in pressing need of State aid.

Objection also arises on the part of two classes of industrialists who receive no benefit from the law at all. These are the refiners who have no production of their own and who, therefore, receive no aid. Their natural source of supply, the independent producers, foresee that with the ruin of these refiners and their own resultant dependence on the large oil companies for the sale of their crude, that they also will be eliminated.

Pipe Line

When General Ionescu, General Manager of State Railways expressed himself as definitely opposed to the building of the Baicoi-Constanta gasoline pipe line, because of the loss of revenue to the railway, he became the subject of criticism for his retrograde point of view. It was commented that as the State owned both railway and pipe line, losses on one would be compensated by gains on the other. Moreover, the pipe line would be of assistance to the oil industry and curtail losses resulting from transportation by rail.

E. Margulieus.

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Mexican Oil Activities

Constitution of 1917

Mexico City (By Wireless)

Legality of petroleum concessions granted since the enactment in 1917 of the articles of the Federal Constitution establishing subsoil nationalization, and the justice with whch petroleum clauses have been interpreted since then, is the subject for a discussion to be held in Mexico City on August 5 at a conference of all the drafters of the 1917 constitution. In connection with the legality of the concessions, discussion will revolve around the question of how far it is possible to determine the historic responsibility of those who deprived landowners of property which would have yielded about $75,000,000 in royalties and rents annually.

The Government during the same time received approximately $4,500,000 monthly in taxes in exchange for passing over the right to national petroleum resources without insuring, by heavy penalties, that these resources would be developed in a reasonable length of time.

Government Loan

California Standard Oil Company of Mexico has made arrangement to advance $2,800,000 to the Mexican Govern-

ment as mentioned in July WORLD PETROLEUM. Following rumors which circulated here and found their way into certain New York City newspapers, to the effect that foreign petroleum companies operating in Mexico were planning to loan the Government from 3,000,000 to 10,000,000 pesos, in the form of advance payments on their taxes, official announcement of California Standard's action was given in a statement to the Mexico City press by General Juan Andreu Almazan, Minister of Communications and Public Works.

Announcement came after much secrecy regarding the rumored loan had been maintained by Government offices and California Standard's local representatives. General Almazan's statement apparently clears up the matter, and disposes of reports that all foreign oil companies in the Mexican field propose to anticipate their tax payments. The transaction between Standard and the Mexican Government was made public in the course of the Minister's statement which concerned the financing of road building in the Republic during the present year. The petroleum company's action, he said, has supplied the 7,000,000 silver pesos necessary to handle the 1931 highway construction program. Standard is anticipating its taxes for the years from 1931 to 1934 by delivering to the Government $400,000 monthly. These payments started last June, and will continue until December.

Taxes

THE same statement predicts that the Federal Government will obtain more than 16,000,000 pesos (approximately $8,000,000) this year from gasoline consumption taxes. This prediction is based on the fact that during the first five months of the present year, gasoline consumption amounted to 557,678 bbl., which afforded $3,346,069 in taxes. While admitting that the consumption levy of six centavos (approximately three cents) per liter is excessive, the statement asserts that the public accepts the tax, knowing that it is destined exclusively to provide their country with good roads.

As a means of assisting domestic industries, kerosene and uncolored gas oil will be imported duty free by order of a presidential decree.

Tariff Policy

IN reviewing the advantage of the protectionist policy to Mexico, a leading Mexico City daily, published by the political party in power, remarks that a tariff designed to protect this particular industry has the advantage of attracting foreign capital and assuring a certain measure of prosperity to the industry without, however, incuring the danger of high prices resulting from a monopoly. The keenness of competition between Standard and Eagle is given as the reason why price control need not be feared in Mexico.

The review of the situation concludes by suggesting to the Mexican people a policy of support toward foreign capital in the Mexican petroleum industry, especially where the company in question bears in mind the interests of the consumer and expresses by their actions willingness to obey the national laws.

Combination

THREE of the largest petroleum companies operating in Mexico, the Huasteca Petroleum, Mexican Sinclair, and La Corona (of the Shell group), plan to form a combination for the manufacture and distribution of gasoline in the Republic, according to information received from unnamed but reasonably reliable sources. Representatives of these companies in Mexico City decline to affirm or deny the reports. According to press reports the three great companies plan thereby to reduce by one-third gasoline manufacturing costs, the number of gasoline stations they maintain in Mexico City, and the number of workers they employ in manufacture and distribution. Such an arrangement may produce considerable marketing economies to the companies concerned.

DOUGLAS GRAHAME.

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Shipping

(Continued from page 498)

112 ships with a total of 1,430,000 tons deadweight, while ships totalling 225,750 tons are still on order. It is stated that this Norwegian tanker group is in favor of the formation of an international association of tanker owners. This is a proposition which was discussed at a meeting of tanker owners at the Hague about 18 months ago, but which did not materialize. With the tanker market in its present state it is questionable whether the time is ripe for the formation of such an association. The association would have had considerably more power had it been formed in the days when some of the big companies were relying upon chartered tonnage rather than upon their own construction. At present the majority of owners have programs of their own on hand, some of the units of which may be surplus to present requirements.

There was recently launched on the Cylde at Scotts of Greenock a 13,800 tonner of rather unusual type for the Standard Transportation Company of New York. This was constructed under the superintendence of N. Pluymert, and is intended for the dirty oil trade. She is unusual in that she has a quadruple-screw expansion steam engine for propulsion, taking steam from three cylindrical boilers burning fuel oil and working at 222 lbs. per sq. inch. With the ship loaded down to her full draft of 28 ft., the engine will develop about 3,600 hp.

Trials.

ON the 8th July the single screw steamship PAN BOLIVAR ran a successful trial trip off the mouth of the River Tyne. The owners were represented by Paul H. Harwood, vice-president of the Pan-American Petroleum & Transport Company of New York for whom the ship has been built. Among others present during the trial trip were Capt. James McBride, marine superintendent, and J. C. Lowrie, both of Andrew Weir & Co., London, acting as agents for the owners. The PAN BOLIVAR (see July issue) has been built by Swan Hunter and Wigham Richardson, Ltd., on the Isherwood system of framing, and is designed to carry oil in bulk with a deadweight capacity of about 14,000 tons.

A. C. HARDY.

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